

# MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XXXI. No. 2.  
WEEKLY.

BALTIMORE, FEBRUARY 5, 1897.

\$4.00 A YEAR.  
SINGLE COPIES, 10 CENTS.

## Manufacturers' Record.

PUBLISHED EVERY FRIDAY BY THE  
Manufacturers' Record Publishing Co.

RICHARD H. EDMONDS, President.  
OFFICE: MANUFACTURERS' RECORD BUILDING,  
BALTIMORE.

RICHARD H. EDMONDS,  
Editor and General Manager.

THOMAS P. GRADY,  
General Southern Correspondent.

NEW ENGLAND OFFICE—John Hancock Building,  
178 Devonshire Street, Boston, Mass.  
S. I. CARPENTER, Manager.

Special Traveling Representatives:  
RICHARD S. EVANS,  
I. S. FIELD.

SUBSCRIPTION, - - - \$4.00 a Year.  
TO FOREIGN COUNTRIES, - - 20s. 6d a Year.

BALTIMORE, FEBRUARY 5, 1897.

The Transcript, of Boston, says:

If the South has near cotton and cheap labor, it has few banks and dear money. Massachusetts has not the cheapest but the best labor and plenty of money, with both the railroads and the banks at the doors of the mills. In peace as in war, victory inclines to the people who join to natural aptitude the better organization. The North has almost a genius for that capacity for organization the South conspicuously lacks.

Why will the South keep on increasing its cotton mills and why do the leading cotton manufacturers of New England persist in building mills South when the learned editor of the Transcript insists that Massachusetts has a greater combination of advantages? Surely, the editor of the Transcript knows more about the cotton-mill business than the managers and owners of New England's cotton mills. He must be the world's accepted authority, for evidently his own reasoning has thoroughly convinced him that he is right and all others wrong, and what has convinced him surely should convince all others.

Of the many agencies which are active now in giving prominence to the business advantages of the South, we know of none more effective than the Manufacturers' Record. The columns of this journal are continually holding up the South to the admiration of the business world, and the service that has been rendered in this way by Mr. Edmonds in the advancement of the South is not easily estimated. Disraeli once said that there were three kinds of lies, a lie, a d—d lie and statistics. However this may be, Mr. Edmonds's statistics of Southern progress seem to be compiled with care and thoroughness, and are doubtless accurate, notwithstanding the fact that they read like the tales of a magician.—Greensboro (N. C.) Record.

If these statistics "read like the tales of a magician," we can only say that the truth is often more wonderful than fiction, and that while many critics have at times attempted to discredit some predictions of the Manufacturers' Record—such, for instance, as the South exporting pig iron and the South's becoming the controlling power in the coarse cotton-goods trade, both already fulfilled—no one has ever yet assailed the correctness of any statistics of Southern progress published in the Manufacturers' Record. The rea-

son is that "facts are very stubborn things," and these statistics are simply facts.

## A Report of the U. S. Agricultural Department on Round Cotton-Baling System.

From time to time the Manufacturers' Record has described the processes designed to revolutionize the handling of cotton from the time when it leaves the gin until it reaches the factory. This great change, affecting nobody more favorably than the planter, is to be wrought by a modification of the shape of the bale. It is to be cylindrical instead of square. Intelligent and progressive planters, carriers, manufacturers and specialists in agricultural economics have for years studied the problem, which must be solved if the South is to maintain her lead as a cotton grower, with profit to the individual planter.

The importance of this study is manifest in the fact that considerable space in the latest publication of the United States Department of Agriculture is devoted to the subject of baling. In the bulletin on the cotton plant, Major Harry Hammond, of South Carolina, a practical planter and an authoritative writer, treats of the handling and uses of cotton, and mentions at length the cylindrical bale. "Taken altogether," he writes, "it is generally admitted that the American bale is the clumsiest, dirtiest, most expensive and most wasteful package in which cotton, or, in fact, any commodity of like value, is anywhere put up. It has no friends either among manufacturers, buyers, shippers, insurers or producers. Custom seems alone responsible for this incubus on the industry."

In addition to a pictorial comparison of American, Egyptian, Indian and Turkish bales, much to the disparagement of the first, Major Hammond presents facts that should convince everybody interested of the wastefulness all along the line of the old method. There is, for instance, a standard bale of 54x27 inches, intended to contain nearly 500 pounds on the average. But bales differ in dimensions and in density, and the difficulty of stowing them in vessels and the expense of handling and transportation are thereby increased. Rain will damage loosely packed bales, and the covering is often so coarse that water and dust easily penetrate it, while much cotton is lost from tears made by the handling hooks, and the rest of the bale is an easy prey to fire from a chance spark. These facts are of importance to the carriers and the insurance agents. Again, there is at present the charge of fifty cents a bale for recompressing at large shipping points, and the cost of fifty or sixty cents and the addition to the weight of the bale in the bagging and ties, which add to the tare of 6 per cent. made at Liverpool, where the price is practically established. It is estimated that the tare on the average shipment amounts to 500,000 bales, worth about

\$14,250,000. This discount could be reduced by the general adoption of the new bale, though by what amount may not be exactly determined at present.

But there are other advantages immediately apparent. In an address before the New England Cotton Manufacturers' Association in 1895, Mr. Edward W. Thomas, of Lowell, Mass., telling of the disadvantages experienced by the manufacturer through poor ginning and baling, insisted that more care should be taken to deliver the cotton to the consumer in far better shape than at present. "Why, with all the progressiveness of the American people, the system is allowed to exist is beyond our conception," said he. "It is safe to say that no other commodity with such value is packed or shipped with so little regard for contents. There is no more reason why cotton should be packed in such a way than that flour and pork should be put up in hundreds of sizes of barrels."

The adoption of the cylindrical bale would insure a practically uniform bale; the expense of recompressing would be eliminated; the loss by sampling would be diminished, even were it not likely that the perfection of the process might not eventually permit the cotton to be sold upon its marking, as is the case now with flour; the density of the bale would be greater and more uniform, thus lessening the fire risk; the fibre would be liable to less injury; fewer handlings would be necessary, and the saving on compressing, handling, transportation and insurance would be, it is conservatively estimated, \$3 or \$4 a bale, or an increase in the value of the crop of \$30,000,000 or \$40,000,000 a year. This should be in the main of advantage to the planter.

But Major Hammond does not err when he adds: "Such processes will encounter much opposition from the dead weight of existing methods and from the large capital invested in their operation, but in the long run the saving and security effected by them ought to secure their adoption." Already the notes of opposition are beginning to be sounded. The Progressive Farmer, of Raleigh, N. C., the organ of the National Farmers' Alliance, sees with unprogressive eye in the adoption of the cylindrical bale and cheaper freight rates on the railroads "a gigantic and diabolical combine to control the price of cotton." Such an utterance was to be expected, though it is hard, in the face of conclusions drawn by skilled men from a study of the new process, to understand why the farmers of the South should follow the advice of the Farmer and unite against the plan. From the time when the reaping machine supplanted the cradle until the present, many men have been ready to oppose any innovation for the improvement of the condition of humanity. In the shifting of methods individuals have, of course, suffered, but the mass has been benefited, and experience should teach the opponent of progress

that it is useless to protest against the inevitable, and that the reader his adaptation of himself to new conditions, the better the outlook for him.

If any unity of action by farmers of the South were needed in connection with the proposed change in the shape of the cotton bale, it would seem that it ought to be directed toward hastening it.

The most curious part of the argument of the Progressive Farmer, the appropriate name of which should be the Unprogressive Farmer, is that the railroads will charge less for handling the round bale than the present square bale, and that the buyers will pay more for cotton packed in the former than in the latter, and, therefore, that all ginners will be forced to abandon the present baling system. Based on this, the Progressive Farmer gets up a great scare that destruction is ahead of the present ginners, and calls upon cotton planters of the South to oppose a system that seems to promise more to this section and to the growers themselves than any other revolutionizing invention of modern times has offered to any section or to any class of people.

## No Fictitious Mining-Stock Boom Wanted.

Evidently a scheme is being very energetically worked to create a speculative boom in the mining regions of North Georgia. There is a good foundation for successful mining operations in North Georgia, and the Manufacturers' Record believes that gold mining in the South will in time become of vast importance, but it regrets to see the conservative, substantial movement now under way endangered by another, the object of which is evidently to bring about a fictitious boom in mining stocks and lands. One illustration of this effort is seen in the sensational dispatches that are being sent out from Dahlonega to papers in the West and North about a great mining boom in that section. Another is found in a letter received by the Manufacturers' Record from Mr. J. T. McCasland, who writes from St. Louis on a letter-head that indicates that he is secretary and treasurer of the National Bauxite Mining & Aluminum Manufacturing Co., of St. Louis, in which is enclosed an extravagant, "boomy" article headed "The Jahannesberg of the Near Future; The Eyes of the Mining World on Dahlonega, Ga., and Adjoining Gold Fields." This article, Mr. McCasland kindly informs us, we are at liberty to publish verbatim. He also tells us that he is furnishing articles to other newspapers, and that he "has recently associated himself with some large corporations who have holdings in the South." Although designed to boom the Dahlonega district of North Georgia, this article has a number of extracts from expert reports of Major Jed Hotchkiss, of Virginia, and others, which were mainly made on gold properties in Virginia, the whole tenor of the arrange-



ment of these extracts, however, being to show that the reports were made on this North Georgia district.

The Manufacturers' Record has no acquaintance whatever with the National Bauxite Mining & Aluminum Manufacturing Co., nor with Mr. J. T. McCasland, but it very greatly regrets to see matters of this kind being utilized for the purpose of a fictitious booming business. If the legitimate mining interests of the South, just as they are beginning to attract the attention of conservative investors and mining operators, are to be cursed by efforts to create a stock and land boom, the effect must necessarily be to seriously retard the legitimate, honest development of all Southern business interests. Dahlonaga and all North Georgia may well pray to be delivered from the lasting injury to their best interests that must inevitably come from any such work as this.

#### Science on a Scientific Basis.

All seekers for accurate information about this country will heartily second the advocacy in Science for January by Dr. Charles W. Dabney, Jr., Assistant Secretary of Agriculture, of the establishment of a National Department of Science. The United States government, he says, is doing more than any other government in the world to discover the resources of its territory and to teach its people to develop them. It employs 5225 persons in this scientific and economic task, not including the census, at an expenditure of nearly \$8,000,000 annually. The work is carried on in twenty-eight separate scientific bureaus, surveys, divisions or investigations, distributed among six different departments, not including fifty-four agricultural experiment stations and many other outlying bureaus. In this multitude of agencies lies the great weakness of the undertaking. Scientific work that demands, first of all, orderly marshalling of material is conducted by disorganizing methods which increase the expense by duplication, decrease the value of results by apparent contradiction or confusion, and impair continuity of investigation upon similar lines through frequent changes among the supervising authorities. To illustrate this last tendency, one need only mention the necessity which a new superintendent of the census often seems to feel to call attention to the imperfections of his predecessor, until the individual investigator is inclined to doubt the value of any census.

To overcome confusion and to place the scientific work of the government upon a scientific basis, Dr. Dabney urges the organization of the several bureaus upon a logical plan, so that without injuring the work of any of them they may co-ordinate in their researches. He would transfer to the new department as opportunity offers the different bureaus and group them about a permanent census bureau, a great statistical agency which would be able to relieve the others of much work and likewise prevent duplication.

The expense of the whole, \$9,000,000 annually, including the census, would be reduced and the working force in each bureau might be diminished, but the energy saved in both cases might, if necessary, be employed in opening new fields. "Is it not time," to use the words of Dr. Dabney, "that we had a complete scientific department for harvesting scientific truth? Such a perfect machine would garner—and garner at much less cost—a far larger harvest

than the varied cumbrous appliances now in use."

#### An Unwise Suggestion in North Carolina.

We regret exceedingly to note even a suggestion looking to the discontinuance of the Geological Survey of North Carolina. For if there was ever a time when the State needed such a survey to explore and make known its resources in the water-powers, minerals and timbers, looking to the development of manufacturing enterprises, now is the time. And we have never known a State survey to accomplish more in a short time, in the way of investigating those matters that are of practical importance to the people, than the North Carolina survey has done.

The State is now beginning to reap the benefits as the preliminary reports are being published and distributed. And it is to these reports that capitalists, thrifty and intelligent people will look for impartial and accurate information when their attention is turned to North Carolina. The work of the survey in one direction alone—showing that artesian-water supplies can be obtained in the eastern counties of the State, and thus malaria be avoided by both natives and settlers—is worth a hundred-fold more to the State than the total cost of the work. But this is only one of the ways in which the results of this work are benefiting the people. In examining and developing water-powers for the erection of cotton mills, the bringing into the State establishments for the manufacture of the timber supplies, and the development of the mineral deposits, are already bringing large amounts of capital into the State. To cripple or discontinue this work in its unfinished condition would be a great loss—indeed, a misfortune—to the State and a specimen of false economy that we trust is not to be seriously thought of. Surely the people of North Carolina will bring such pressure to bear upon the legislature as to prevent any action looking either to a discontinuance of this work or even to a curtailment of it.

#### Deepening the Mississippi Channel.

The question of improving the Mississippi river by closing the break in the levee known as Pass a Loutre has been the subject of a congressional investigation, and a committee has visited the lower Mississippi to personally investigate. It was accompanied by Engineer E. L. Corthell and several government officers interested in the river improvement. According to Mr. Corthell's report, the Pass a Loutre is now 2250 feet wide and from twenty to sixty feet deep. The water flowing through the cravasse has greatly decreased the depth of water in what is known as the South Pass channel, and experts are of the opinion that the former will seriously interfere with the commerce of New Orleans if not closed. Through the efforts of the commercial bodies of the cities on the Mississippi, an appropriation of \$250,000 has been reported favorably by the congressional committee for this work.

The Texas cotton-ginners have formed an association for mutual protection and benefit, under the title of the Texas Cotton-Ginners' Association. The body will endeavor to have additional laws passed giving its members a right to place liens on cotton when ginned as security for payment of the work. The officers are J. F. Pruden, president; E. E. Baggett, C. M. Hubby, J. H. Kealy, vice-presidents; Charles Bannister, secretary, and Charles T. Hunter, assistant secretary.

#### MANUFACTURERS IN CONVENTION.

##### Second Annual Gathering of the National Association in Philadelphia.

[Editorial Cor. Manufacturers' Record.]

Philadelphia, Pa., January 29.

The second annual convention of the National Association of Manufacturers, which has occupied three days of this week, has been a notable gathering of representative manufacturers from many sections of the United States, and from many branches of industry. The register of members and visitors showed an aggregate attendance of about 450 men, and it is worthy of note that with hardly an exception they were actual manufacturers and principals. It certainly speaks well for the standing of the association when so many heads of important interests are willing to leave their business for three or four days and face the discomforts of a blizzard to attend a convention of this character. With more favorable weather the attendance probably would have been 50 per cent. larger. Those who attended the convention must feel themselves abundantly repaid by practical value of the discussions and by the magnificent hospitality of the Philadelphia members of the association.

The business sessions were held in Horticultural Hall, a beautiful building which was completed only a few months ago. President Theodore C. Search called the convention to order on Tuesday morning, and after a brief address of welcome by Mr. Charles Heber Clark, and the appointment of the standing committees, the reading of the annual report was begun.

The annual report of the president was a noteworthy document, setting forth in detail the work of the past year, and suggesting many lines of operation which might profitably occupy the future attention of the association. The reading of this report occupied a full hour, but so deep was the interest of the convention that it was followed with the closest attention and without the slightest manifestation of uneasiness on the part of any listener. As the report forms a pamphlet of thirty-two pages, it is impossible to do more than to refer to a few salient points, but copies of the full report can be obtained upon application to the Bureau of Publicity of the Association in Philadelphia.

##### GROWTH IN MEMBERSHIP.

After showing the growth of the association from a membership of 300 to about 900 during the year, and after pointing out the thoroughly representative character of this membership, Mr. Search referred in detail to each line of work undertaken during the past year or suggested for the future. The organization of the commission of American manufacturers, which visited Brazil, Argentine and Uruguay last summer, was described, and the results of the trip were outlined, the full report of the commission being presented in a volume of over 100 pages, which was given out during the meeting. Briefly, the finding of this commission is that our trade with South America can be largely increased if merchants and manufacturers will take the trouble to study the markets and send competent men down there to get the business.

The proposed system of sample warehouses for the display and sale of American products in the Central and South American countries was touched upon, and the first steps which have been taken in Caracas, Venezuela, were described at length. Mr. Search directed the attention of the association to the possibilities of such depots if established in London or European trade centres.

The substance of an extended report of the committee which visited Mexico was given in Mr. Search's address. The recommendation of this committee was for the establishment of warehouses in Mexico similar to those under consideration in connection with countries further south.

##### JAPAN AS A CUSTOMER.

The bugaboo of an industrial invasion from Japan and China, which figured so prominently in the convention one year ago, was dispelled by Mr. Search's reference to the exhaustive Japanese investigations conducted by Robert P. Porter under direction of the association. Mr. Search said:

"To express briefly the conclusions which may be drawn from Mr. Porter's investigations and from similar studies by other observant men, it seems safe to say that the ability of Japanese manufacturers to enter successfully into competition with their European and American rivals is limited at present to a few branches of industry, and the extension of this competition is likely to be somewhat restricted by changing industrial and social conditions in Japan. On the other hand, the growth and transformation of Japan's industries necessitates the extensive use of foreign machinery, supplies and material. While some of our industries may be suffering from the competition of rivals in Japan, it would seem that the most important relation that country bears to the United States is that of a profitable customer rather than a dangerous competitor."

Apropos of the Orient, Mr. Search pointed out the vast opportunity for the sale of American products which will accompany the industrial awakening of China, now just beginning.

##### NICARAGUA CANAL ENDORSED.

A strong endorsement of the Nicaragua canal was contained in Mr. Search's report, and the vital principles embodied in this project were thus brought out:

"1. That the Nicaragua canal would be of great value to the United States in its trade with our Pacific coast, the west coast of South America and with the Orient, is accepted as a fact.

"2. Under no circumstances should the control, if constructed, be permitted to pass into the hands of any of the European powers.

"3. The construction of public works of such magnitude necessitates the assistance or indorsement of some great power, as unassisted private enterprise shrinks from so great an undertaking.

"4. The assistance of the United States government is necessary to insure the construction of the canal, and the control of the completed works should be vested in our government in order to prevent it from becoming a menace to our interests in the hands of some other nation."

The need of the merchant marine of the United States were treated of at length, and Mr. Search made a strong appeal for harmony among the friends of American shipping and for immediate action.

The tariff situation was outlined clearly and strongly, but in a conservative manner, and moderations in all changes of duties was urgently counseled. Reciprocity was cited as a vital principle in foreign trade, and its restoration as a recognized factor was urged.

Needs of the consular service were stated thus:

"1. A system of appointments and promotions based solely upon merit.

"2. Tenure of office during continued good conduct and competency.

"3. Compensation sufficient to induce competent men to enter and remain in the service."



## DEPARTMENT OF COMMERCE AND MANUFACTURES.

The proposed Department of Commerce and Manufactures, which has been so strongly urged by the National Association of Manufacturers, and which has been kept so prominently before the readers of the Manufacturers' Record during the past year, formed a carefully-prepared chapter in Mr. Search's report. It was shown that all the leading governments maintain such agencies for the promotion of business interests, and the need for the proposed department was forcibly stated.

A new line of work was suggested in the form of an investigation of the patent and trade-mark laws of various countries. The question of national uniform freight classification was touched upon, and the need for a national bankruptcy law was briefly argued.

Attention was directed to the great Paris International Exposition of 1900, and the Nashville Centennial Exposition was given a strong endorsement, in part as follows:

"This enterprise has been planned upon a liberal scale. The buildings are large and architecturally attractive, and the grounds are admirably adapted for the purpose. It seems sure that this exposition will be an event of far-reaching importance, and as the people of Tennessee earnestly desire that the National Association of Manufacturers shall give its endorsement to this enterprise, it seems quite fitting that we should commend it to our members and to the manufacturers of the United States in general. I desire, therefore, to present this exposition for your most favorable consideration, and for such support as it may be practicable for you to extend to it by participation or otherwise."

## REPORTS OF COMMITTEES.

Reports from various committees, dealing more fully with some of the subjects mentioned in the report of the president, were submitted as follows:

Committee on Mexico, T. H. Martin, chairman.

Committee on Transportation, E. P. Wilson, chairman.

Committee on Reciprocity, Thomas P. Egan, chairman.

Committee on Department of Commerce and Manufactures, Charles A. Schieren, chairman.

The report of Treasurer Robert Laidlaw showed receipts for 1896 amounting to \$40,234.31; expenditures, \$39,429.80; balance on January 1, 1897, \$804.51.

The first day concluded with an evening entertainment in the Hotel Walton in the form of a "Bohemian Smoker." This was wholly informal in character, and it afforded an excellent opportunity for bringing the members and visitors into pleasant social relations. The influence of the entertainment was manifest in subsequent sessions, and it proved itself an eminently practical feature of the convention programme.

With the opening of Wednesday morning's session the president's annual report was taken up section by section for discussion and action. For the most part the recommendations of President Search were approved without discussion, but a few items were subjected to debate and analysis, all with perfect friendliness and with little dissent.

## VIEWS ON THE TARIFF.

The tariff question was referred to a committee consisting of Charles Heber Clark, Pennsylvania; Thomas Dolan, Pennsylvania; F. S. Fish, Indiana; G. J. Seabury, New Jersey; J. F. Hanson, Georgia; Lyman B. Jewell, Connecticut. The resolutions reported by this committee and slightly amended by the convention were as follows:

"Resolved, That it is the sense of the National Association of Manufacturers that the tariff law should be revised at the earliest possible moment, in order that uncertainty may be removed, confidence restored and business permitted to revive.

"Resolved, That the duties should be such as will be consistent with adequate protection of our manufacturing industries and the labor they employ. The tariff should contain only specific duties, or mixed ad valorem and specific duties.

"Resolved, That Congress should be invited to re-establish and extend the system of reciprocity, which may be employed to secure for us tariff favors in Latin-America and other markets in which we are the largest buyers, while Europe is the preferred seller solely because of the lower wage rates and lower general cost of production in European factories."

A resolution providing for further investigation of the proposed plan for warehouses in Mexico was adopted, as was also a resolution heartily endorsing the Tennessee Centennial Exposition and urging the members to give it their most cordial support.

## PRACTICAL TECHNICAL EDUCATION.

After the adjournment of the Wednesday afternoon business session a large number of the visitors accepted the invitation of President Search to inspect the technical departments of the Pennsylvania Museums and Schools of Industrial Art, a few steps below the convention hall. Those who visited the schools were afforded an opportunity to see the practical workings of one of the most remarkable institutions for technical training in this country. The textile department in particular attracted the attention and aroused the interest of the visitors. Every kind of machinery used in the textile industries is installed and in practical operation in this school. The students are given thorough instruction in every step of the work from the designing of fabrics and making the patterns to the production of the finished goods. As a result of this training in actual work, the graduates of this school are qualified in an unusual degree to take up practical manufacturing operations. The manufacturers who visited this school were particularly impressed with the value of the work done there. This visit was made the more interesting by the fact that the school is the creation of Mr. Search, who founded it fourteen years ago, and for a time conducted it alone, teaching the classes and paying all the bills.

Wednesday evening was devoted to a very interesting discussion of methods of promoting foreign trade. Several speakers drew upon their own practical experience and their observations of the trade methods of various foreign countries. Those who took part in this informal discussion were Charles A. Schieren, of New York; John P. Wood, of Philadelphia; William Harper, of Philadelphia; Frederick Emory, of Washington, and Frederick O. Smith, of Bridgeton, N. J.

## MERCHANT MARINE AND CONSULAR REFORM.

Two important resolutions were reported to the convention on Thursday morning and were unanimously adopted. The committee on merchant marine, consisting of Thomas P. Egan, of Ohio; Charles Heber Clark, of Pennsylvania; Charles A. More, of New York; Benjamin Atha, of New Jersey, and W. C. Nones, of Kentucky, reported the following:

"Resolved, That this association views with the greatest pleasure and satisfaction that the need of protecting American ships in the foreign trade has re-

cently received extended attention and approval by the American people and by President-elect McKinley, under whose forthcoming administration it is our earnest hope and expectation that this long-deferred revival of the American merchant marine will be patriotically, zealously and immediately undertaken, so that American foreign commerce may hereafter and evermore employ ships built, owned and manned by Americans."

The committee on reform of the consular service, consisting of D. A. Tompkins, of North Carolina; Lyman B. Jewell, of Connecticut; H. J. M. Cardeza, of New York; William C. Barker, of New York, and Geo. H. Barbour, of Michigan, reported the following:

"Resolved, That it is the sense of this association that the entire consular service should be placed under the civil service rules for the purpose of creating a corps of trained consuls and consular officers and clerks.

"Resolved, That consular officers and clerks should be American citizens, receiving reasonable salaries, and not fees.

"Resolved, At the most important trade centres we recommend that our government should own consular buildings of sufficient size and character to make proper and dignified headquarters for the commercial representatives of this country."

## ELECTION OF OFFICERS.

The election of officers for the ensuing year resulted as follows:

President, Theodore C. Search, Philadelphia, Pa.

Secretary, E. P. Wilson, Cincinnati, Ohio.

Treasurer, Robert Laidlaw, Cincinnati, Ohio.

Vice-Presidents:

Connecticut—Pliny Jewell, Hartford.

Delaware—C. W. Pusey, Wilmington.

Georgia—J. F. Hanson, Macon.

Illinois—Charles F. Quincy, Chicago.

Indiana—P. E. Studebaker, South Bend.

Kansas—Thomas P. Ryan, Topeka.

Kentucky—W. C. Nones, Louisville.

Maryland—David L. Bartlett, Baltimore.

Michigan—George H. Barbour, Detroit.

New Jersey—Benjamin Atha, Newark.

New York—Warner Miller, New York.

North Carolina—D. A. Tompkins, Charlotte.

Ohio—John H. Patterson, Dayton.

Pennsylvania—John H. Converse, Philadelphia.

Rhode Island—S. M. Nicholson, Providence.

South Carolina—Ellison A. Smyth, Pelzer.

Tennessee—C. D. Mitchell, Chattanooga.

Vermont—Henry Fairbanks, St. Johnsbury.

Wisconsin—John C. Spencer, Milwaukee.

Vacancies not filled by the convention will be filled by the executive committee.

After selecting New York as the next place for holding the annual convention, and adopting the usual votes of thanks, the convention adjourned.

When the convention adjourned the members and visitors proceeded in a body to the Commercial Museum, which occupies the old Pennsylvania Railroad office at No. 233 South Fourth street. Lunch was served there, and the afternoon was spent in examining the many features of interest about that great institution. Few of the visitors had ever been there before, and they were surprised by the wonderful collections of raw materials and finished products gathered from all parts of the world, and the very complete system for furnishing commercial

information about all the world's markets.

A banquet in the Philadelphia Bourse on Thursday evening, when over 400 guests were seated about the tables, concluded the convention's programme.

This bare outline of the work of the convention would be incomplete without some reference to the generous hospitality of Philadelphia. It may be seriously questioned whether any city in the South, taking a just pride in its record for hospitality, ever handled a large convention with such liberality and with so many evidences of unstinted hospitality as the Manufacturers' Convention enjoyed at the hands of the Philadelphia people. The arrangements made by the local committee for the entertainment of visitors included a magnificent banquet at the Bourse, the freedom to use carriages without stint, and the best seats in all the leading theatres during the convention, all at the expense of the Philadelphia committee.

To many of the members who had never closely studied Philadelphia and its business interests, this visit brought many revelations. The broadness with which that city is developing enterprises of national interest and importance, such as the Philadelphia Museum, the Philadelphia Textile School and the Bourse, and giving to the country at large the benefits of these institutions, places Philadelphia far in the lead of all American cities in doing at its own cost work in which the whole country reaps the profit:

## SANITATION AND NEATNESS.

## A Suggestion for Southern Towns.

## A Baltimore Traveler's Suggestion of Sewerage, Paint and Whitewash as a Profitable Investment.

Mr. Chas. H. Grasty, president of the Evening News Publishing Co. of Baltimore, who returned recently from a trip through Virginia and the Carolinas, brings back the usual enthusiastic reports about the South. "There is no doubt," said he to a representative of the Manufacturers' Record, "of the solidity of Southern growth. The Manufacturers' Record and the 'Southern States' magazine have a sound proposition to offer to the manufacturer, the farmer and the investor. No other section of the country shows up so well after the years of hard times, and with the return of general prosperity the southward movement will be the feature of the material development of the country.

"There is one reform that the Manufacturers' Record, reaching, as it does, every Southern community, ought to take up and hammer at until it is accomplished. I mean cleanliness and sanitation in Southern towns, and on Southern farms, too, for that matter. The farmers could well spare a little extra whitewash and muscle to make their places look neat and attractive. But in the small towns remissness in this matter is particularly inexcusable. If the prosperous towns of from 2000 to 10,000 population would put in sewage systems like that at Roland Park, near Baltimore, and economical water works, it would be worth the investment a hundred times over in every instance. In keeping with this, and perhaps as a result, would be a general bracing up in the matter of appearances. The railroads might set a good example with paint and whitewash and landscape gardening on a cheap scale around their depots.

"This suggestion does not apply to Aiken, where I spent most of my time. This charming winter resort is as pleasing to the eye as it is beneficial to the



health. It is the towns which are bidding for industrial growth which stand in need of improvement along the lines in which similar towns in Pennsylvania have set so good an example."

#### Mr. Edward Atkinson on Farm Conditions.

In a recent letter to the Manufacturers' Record, Mr. Edward Atkinson said:

"I am to address the State board of agriculture of New Jersey on Friday of next week. The subject assigned to me is 'The Economic Relations of Agriculture as Compared to Other Industries in the United States.' In the course of that lecture I shall deal with a Southern town which may be nameless, and with a section of a Northern State. Thinking that this extract may be of interest to your readers and of service to my Southern friends, I send it to you in advance of the lecture."

The extracts furnished by Mr. Atkinson are as follows:

"Let me now give you an example which may stand for a very extraordinary case, but yet may represent a widespread cause of depression and loss. There is a town in one of the oldest States of this Union, situated at the head of navigation on an important river. The township and the neighborhood are on the rolling land, not far away covered with thick forests. The climate is one of the best. There is no stagnant water; there is no malaria; few flies and few mosquitoes; a salubrious climate—warm in winter, cool in summer in the evenings and nights. The soil is of that kind so well described by Governor Wise, 'The niggers skinned the land and the white men skinned the niggers.' Great crops of tobacco were formerly raised throughout this region. The river has already been converted to power, the dam being constructed and the canal capable of use. At the beginning of the boom period an effort was made to lay out a city and to sell lots at fancy prices. Fortunately, few were caught, and that enterprise failed. Next the effort has been made to get Northern capital for the establishment of a cotton mill. As yet the capital has not been found.

"A Northern man, being attracted by the excellent natural conditions and surroundings, bought one of the old estates, not a large one, established himself and made an effort to promote energy and to instruct the people how to develop from within. In that he has failed. I have lately visited this town. I witnessed great piles of railway sleepers cut from white oak. These ties or sleepers are hauled from two to twenty-five miles, over very bad roads. The business has been going on for about eighteen years. A white oak tree of fifty to sixty years' growth yields about three sleepers, of which the average price at the wharf ready for shipment is thirty-three cents. A hundred and fifty thousand white oak trees are annually cut down for this purpose. The bark of the white oak, which is rich in tanning property, is allowed to rot in the forest. Not long since a commercial traveler for a New Hampshire woodworking establishment visited that place to take orders for woodenware. They asked him where he obtained his oak, to which he replied that he believed his employers annually bought one or two cargoes of white oak sleepers at that place, which were converted in New Hampshire into woodenware, of which he had brought samples to be sold.

"Now to the mode of dealing with this soil. It is said that the farmers of this section get their small cash income from the white oak sleepers, making a miserable crop of corn and meat from their

farms. My friend had about five acres of meadow level, between which and the slope of the hill was a spring of the purest water. This gave assurance of moisture in the light soil. It had been scathed with tobacco, and seemed to be capable of producing nothing but wire grass and mullein stalks. He proposed to plant corn. The native farmer, whom he had chosen to work his field as being the most intelligent man on that line, urged him not to waste his money. He persisted. He sent into the town for the stable manure, which had been carried to the bank of the river in order that it might wash away, buying it at fifty cents a load, put on a sufficient quantity and plowed it in. In place of planting one seed to a hill, wide apart, he caused his farmer to plant three seeds together in closer lines, chopping out after the sprouting. His first crop on the land which 'wouldn't produce no corn,' on which the farmers all thought that he was wasting his money, was seventy-five bushels to the acre, of a quality so superior that the miller of the neighborhood paid five cents a bushel extra price for all that he could spare.

"I happened to drive about the utterly bad roads of that town to look at the neighborhood. I saw a water pipe being laid for fire purposes a distance of half a mile, of only two inches capacity—an utter waste of money due to the lack of comprehension which marks the farming, the manufacturing and the administration of that place.

"It need not be added that in that town and section the majority of votes in the recent election was largely for free silver. The motive of these people, who are simply representatives of too large a class throughout this country, which boasts of its intelligence, aptitude and energy, corresponds to the composition on 'Self-dependence' which was presented by a school boy to the principal of Exeter Academy. He said, 'Self-dependence is that quality of the human mind which leads us to get some one else to do what we ought to do for ourselves.' May we not attribute a very large part of the hue and cry about depression in farming to that definition of self-dependence?

"Yet this poverty of ideas, this poverty of capital and this failure to realize welfare from great natural resources is not limited to sections of great undeveloped wealth. It is to be found in other places where great wealth has once been developed from agriculture, and where people are now suffering, getting more deeply in debt and eagerly seeking a way out of bad conditions.

"I lately visited another section in another State where agriculture has been the main resource for many generations; where the big barns are bigger than churches and so resemble them in material and appearance that when the Southern troops invaded that territory they mistook the barns for churches. In that section are different classes living upon inherited wealth, but slowly becoming poorer because they conduct their farming operations as their fathers and grandfathers did, grumbling about Western competition in being subject to loss, but without any attempt to change their old methods and without effort to meet the new conditions by varying and bettering their crops.

"Yet in each of these States there are many farmers who are up to date, who have foreseen the influence of cheap transportation, and who now prosper as fully as they ever did. Do not these facts indicate that depression in agriculture may not be imputed to any fault in the material conditions? Can we gen-

erate mental aptitude so that all may farm with brains? Is not that the problem before us?"

#### The Long-Talked-Of Steel Mill.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., February 2.

The announcement that at last a steel mill at Birmingham has passed the stage of probability will be received by many with "cum grano salis." But it is so. The Birmingham Rolling Mills are largely interested in promoting a steel plant. It would add greatly in convenience to its business and something to its profit side. Last spring it laid its plans for its erection. Plans were drawn, the site selected, the money provided, when other interests stepped forward with similar propositions. The Rolling Mill people withdrew, leaving a clear field for occupation. It wasn't even fenced in. It has lain idle. Now the Rolling Mill interest, tired out with its long wait, comes forward again and says to our people: "We will take half the stock if Birmingham will place the other half, and build the mill without delay." They mean business. The plant, practically, is secured, and the longest stride in the progress of Birmingham will have been taken when the first spade is sunk into the ground for the foundation work. The capital, capacity and details connected with it are withheld by request until it has reached the point of a "fait accompli." To many who read this it will be like the cry of "the wolf" to the shepherd. But the cry this time is full of business. The steel plant, like the wolf, has finally come. It has come to stay this time.

Last week the weather was dead against business, and actual transactions in iron were very limited. With the moderation of the weather inquiries greatly increased, until on Saturday the aggregate of inquiries and offers amounted to 20,000 tons to one interest. Some offers were for round lots at shaded prices, and the majority of them were declined. There was one order from the United Kingdom for 3000 tons at concessions not accepted. A counter proposition was cabled which it was believed would secure the order. Your correspondent was shown another cable telegram for 4000 tons, covering three grades and asking for prices for Italian and Russian delivery. The prices bid were pretty close, but not so far from sales price as to dampen the hope of mutual satisfaction. There has been a persistent effort from influential buying sources to weaken selling price, but it has failed of material success. The furnaces, as a rule, decline to make material concessions in price. The output continues on a par with capacity, and all have faith in a business that will prove satisfactory this year. Mention has been made of a largely-increased demand from varied sources for relay or second-hand rails. One sale of eighteen miles was made last Friday; that is, the price and delivery were accepted, and terms of payment are in process of adjustment. The minor industries have had rather a quiet week, the distribution of good business being irregular. None had secured any fresh contracts of interest. But there is a good deal of figuring being done on work "in sight." The Auditorium is gradually approaching completion. The additions to their plants made by "the Northington-Munger-Pratt Co." and "The Smith Bros.' Gin Works" attest a growth of business in a season universally characterized as distressing. And now, just for fun, and because there is no hall large enough to accommodate the crowd that will attend the Mardi Gras ball to be given to the king of the

carnival, we are going to erect a special building to house the revelers for that one night, and tear it down "after the ball." If we can erect such a building, "just for fun," it would naturally follow that we are approaching that point where serious business enterprises that commend themselves to favor will need only mention to command substantial aid.

The report of the State inspector of mines will show a decreased output of about 500,000 tons coal for 1896 as compared with 1895. It was estimated at 1,000,000 tons decrease, based on the decreased output of several large companies, but there are many small companies that entered the field in 1896, and many already in increased their output, thus offsetting in part the decrease in the larger companies. J. M. K.

#### A Criticism of Banking Methods.

J. E. Keelyn, president of the Western Telephone Construction Co., Chicago, Ill., in a letter to the Manufacturers' Record, says:

"Business started off following election with good prospects. The stringency was more determined than most people were aware. Orders and inquiries have been very active since election. Collections have been reasonably good. A general desire to make a little additional credit is apparent by both debtor and creditor. The banks have an overabundance of money; in fact, are glutted with it. It is only selected paper, however, which can get accommodations, and this class of paper can obtain low interest rates.

"However, it is not the gilt-edged credits, altogether, which make the wheels of industry hum. The enterprising and sanguine merchant or manufacturer is in the great majority always during dull or good times. During dull times his borrowing capacity limits him. We must await that near-approaching period when the enterprising branch of our industries is able to obtain accommodations, before expecting real good times. It is an unfortunate condition of our banking and economic policy that at such times as these only people can get credit that have little need for it, or those who have gilt-edged bonds to back it up.

"There is also a disposition on the part of certain new school financiers to inervate. The result is that business men, as well as money lenders, are kept in constant fear of the future.

"Comptroller Eckels, at a bankers' banquet, in one breath will speak of the timidity of capital and in the next breath dictate to the newspapers a call upon the banks for a statement. Without disparaging Mr. Eckels, who seems energetic and active, he certainly creates panicky periods, without any apparent necessity. The tendency of all such efforts is to strengthen the strong and weaken the weak. The big bank dictates to the little bank, and it is quite fair, from the experience of the past few years, to assert our need for more small banks and less large banks, if our small manufacturers and small merchants are to be best accommodated.

"It is a distressing spectacle to have witnessed within the past month a star-chamber meeting by a committee of the clearing-house, who determined arbitrarily the financial policy of the entire community.

"The large cities have great need for fear when the entire banking system of the city can be twisted at will by a clearing-house committee.

"The writer is not disposed to feel any alarm from these things. The people are bigger than the banks; the people are bigger than machine politicians; the people are stronger than the populist fever



of wild-cat ideas generally. We have passed through a series of almost revolutionary conditions, and will find a way to overcome such evils as may present great danger. There seems no doubt of a prosperous year. Our business is very good, and our orders on hand will keep us busy for ninety days to come. The prospects foreshadow a large increase."

#### Some Suggestions for Financial Reforms.

Atlanta, Ga., January 9.

Editor *Manufacturers' Record*:

The recent agitation and election demonstrated that although the people of the United States will listen to revolutionary theories of government, when it comes to voting they still remember the words of Washington, who said: "It is of infinite moment that you should properly estimate the immense value of your national Union to your collective and individual happiness; that you should cherish a cordial, habitual and immovable attachment to it, accustoming yourselves to think and to speak of it as a palladium of your political safety and prosperity; watching for its preservation with zealous anxiety; discountenancing whatever may suggest even a suspicion that it can in any event be abandoned, and indignantly frowning upon the first dawning of every attempt to alienate any portion of our country from the rest, or to enfeeble the sacred ties which now link together the various parts."

The people of the United States are resting easy under the firm conviction that under the constitution they will be fully protected in their political freedom, and a majority are willing to believe that the government of the United States can and must protect them in their financial and industrial freedom. In 100 years a great economic revolution has been instrumental in changing the character of our people and their industries; therefore, in seeking to obtain legislation for the relief of the people we must disregard past legislative precedents and endeavor to legislate on advanced and scientific lines. It is essential, for the general welfare and prosperity, that the government of the United States pass such laws as will—first, reform the currency, and second, protect the industrial masses from the growing power of trusts and monopolies. While these two subjects are closely connected, I will, in this paper, touch the first only.

The effect of the panic of 1893 is still upon us, and business will not open up as fully as was predicted unless the United States government will boldly and decisively meet the demands of the nation by recognizing that its duty is to pass such laws as will keep all forms of money, metallic and paper, on a parity with each other in the markets; to ameliorate the condition of the country by the proper use of bank credits, wisely controlled; to give each section of our common country the greatest financial freedom consistent with sound principles, and to always preserve the treasury of the United States free and independent. I believe that there is a duty "devolving upon Congress, in relation to the currency, beyond the mere regulation of the gold and silver coins" (Webster), and that in all its past legislation Congress has not done its full duty. The people now see "the necessity of a general government, which shall have the power to regulate commerce and provide a uniform and sound currency for the country." (Webster). In issuing its notes to circulate as money and be a legal tender, the government violated the first principles of banking in allowing its notes to continue in circulation. After the war the

government inflicted a great injury upon the commerce of the nation. The present situation would appear to demand first the retirement of all forms of paper money, including silver and gold certificates, and to avoid the issuing of bonds to accomplish it. The national bank act should be repealed, and another act, to be known as a national currency act, should be passed, which, under proper control and regulation, would enable any bank to issue notes to circulate as money, provided it would lend to the government such aid as it might need in retiring its issues. If the basis upon which the government under this act would permit State banks to issue is made sufficiently liberal, and will permit a sound and scientific issue, then the banks can and will provide for the retirement of all forms of paper issued by the government. By restoring charter rights to the individual States, banks of issue will become, as they should essentially be, local and not national institutions, and will supply the needs of the agricultural as well as the commercial sections for the necessary circulating medium. Whenever the general government has undertaken to charter the banks of issue, the result has been that the cities and large towns would be supplied with a circulating medium, but the country and small towns would be in need of it.

The usurpation of the right to charter banks of issue is the cause of the currency complications we have to contend against today; in fact, as I have contended since 1886, if it had not been for the existence of the national banking system I believe the treasury notes would have been long ago retired, the silver question never sprung in such force, and the government been out of the banking business. In 1847 the government dues were paid in gold and silver, and the State banks issued notes. The currency, therefore, consisted of government coins and bank notes. The only trouble at that time was that Congress forgot its duty to the people of keeping all forms of money sound and uniform by not regulating and controlling the issues of the State banks. Now, I claim that if the government will require all public dues to be paid in gold and silver coin, if it will allow any bank to act as a government depository which can put up the proper security, and will permit State banks to issue on a sound but remunerative basis, the general welfare will be subserved, the rights of the people be respected, the duty of Congress performed and commerce be free, for the first time since the formation of our government, to work under a perfect system. The great problem which the government will have to face in attempting to effect a reform as outlined will be the ability of the banks to observe and hold as reserve the vast amount of silver held by the treasury. While this question is a very serious one, still I believe that the great results to be accomplished for the general welfare will warrant the government, with its great resources, undertaking it. When a government can summon to its aid, in the solution of such a practical financial problem, such men as Cannon, Gage, Simmons, Fairchild, Trenholm, Eckels and others, it would appear that a scheme could be presented to gradually and safely accomplish the desired result. The commercial bodies of the country will on 12th of January meet in Indianapolis to consider the question of currency reformation, and I hope better banking facilities. Would it not be well for all the great railroads of the country to actively join the commercial bodies and demand immediate action of Congress, even if it necessitates

an extra session? Under such a system of currency as I have briefly outlined I believe the railroads in the South would immediately be benefited, and in a short time the people of the South could and would become, as they have been in the past, large holders of the securities of these roads. An independent United States treasury and greater financial freedom is what we must have.

GEORGE R. De SAUSSURE.

#### Coal and Lumber Interests Around Clarksburg, W. Va.

Clarksburg, W. Va., January 16.

Editor *Manufacturers' Record*:

The West Virginia & Pittsburgh Railroad, extending from Clarksburg, W. Va., via Weston and Buckhannon to Pickens, with a branch from Weston via Sutton to Camden-on-Gauley, penetrates the famous hardwood area of the State.

This company owns and operates about 175 miles of road, and fosters the principal lumber business of the State.

There are a large number of plants on this line devoted to the manufacture of lumber, and among them are the Gauley Co., Alexander Lumber Co., Pardee & Curtin Lumber Co., West Virginia Hardwood Lumber Co., Keystone Lumber Co., Webster Mining & Lumber Co., Elk River Land & Lumber Co., C. H. Smoot & Co., the Pickens Co., Smoot Lumber Co., Alton Lumber & Coal Co. and A. G. Giffin, with a combined daily capacity of more than 600,000 feet.

The Gauley Co., Alexander Lumber Co. and A. G. Giffin each have a daily capacity of 100,000 feet. In addition to these, there are many portable saw mills operated along the line, which would run the total daily capacity up to at least 1,000,000 feet.

The Columbia Manufacturing Co., which is one of the largest industries on the line, is located at Karl's Siding, near Sutton, and confines its operations principally to the manufacture of chair and desk stock.

Mr. A. G. Giffin has under construction a short line of railroad from Bean's Island, near Alton, up Panther's Fork, to handle the timber on a large tract of land which he owns.

The Braxton Lumber & Coal Co. has recently put in a saw-mill plant to manufacture the timber on a large tract of land owned by that company between Gillespie and Palmer, on this line.

The shipments of forest products from the line of the W. Va. & P. R. R. for the year ended June 30, 1896, were 155,000 tons, or about 10,000 carloads, and it is confidently expected that there will be a large increase in the shipments during the current year.

There are several advantageous points on this line for pulp works, tanneries and box factories.

A company has been recently organized to build a well-appointed and commodious summer hotel at the famous Salt Sulphur Springs at Addison, W. Va., which the projectors expect to have ready to accommodate guests not later than July 1 next.

The northern extremity of this line of railroad penetrates the Pittsburg vein of coal for a distance of seven or eight miles. This vein of coal is from seven and one-half to nine feet thick, all drift, and the quality so well known for its excellence that comment is unnecessary.

A prominent official of this railroad company said: "Business in general on our line has improved since the late Presidential election, and the prospects for lumber shipments during the present year seem to be encouraging."

The Monongahela River Railroad, which extends from Clarksburg, W. Va.,

down the west fork of the Monongahela river to Fairmont, a distance of thirty-three miles, passes through one of the thickest, richest and most accessible deposits of coal in the State for its entire length.

The Monongah Coal & Coke Co. owned some 15,000 acres of valuable coal land on this line, which is now controlled by the Monongahela River Railroad Co., and as the railroad company is principally interested in the matter of traffic for its successful operation, the entire lands heretofore held by the Monongah Coal & Coke Co. will be opened up for development and inducements given to open and operate new mines on the basis of a very low royalty.

There are at present ten companies on this line successfully operating mines and manufacturing coke, and negotiations are pending with two parties, one from Pennsylvania and one from the southern portion of this State, to open up new plants on the line of this road. This railroad company is being urged to bridge the river at two places along the line, in order to develop additional coal territory on the opposite side of the river, and I am reliably informed that probably both of these bridges will be built during the present year. As to the output of the mines and the traffic handled by this railroad, I will quote from a person in a position to know:

"We expect the aggregate output of the mines on the line of this road to reach during the coming summer something like a capacity of from 500 to 800 carloads daily. In fact, our old-established mines, which were worked in 1894, reached the output of nearly 500 cars per day, and with twice as many mines working in 1897 as we had in 1894, it may be that the business which we think will finally come to this section will enable the total number of mines on the line of this road to ship something in the neighborhood of from 800 to 1000 cars per day, of from twenty to thirty tons each. We confidently expect to see within the next few years a large number of mines in successful operation between Clarksburg and Fairmont, and it may be that at no distant date the line of this road will represent a coke-oven scene like that in the Connellsville region of Pennsylvania."

In the vicinity of Clarksburg, on the Baltimore & Ohio Railroad, there are six mines in successful operation, with an approximate daily capacity of 3000 tons, and fair prospects of at least two additional mines being opened during the year. The avowed policy of the present management of the B. & O. is not to foster private enterprises, but to reach out and secure the greatest amount of traffic possible, by giving a low rate as an inducement to industries of all classes locating on its line of road, which enables them to put their products in the markets on an equal footing with similar industries located on other lines of road and in other localities. The rates maintained by the former management did much toward retarding the development of possibly the richest section in West Virginia, and kept out millions of dollars that would otherwise have found profitable investment along its line of road, and, directly and indirectly, given employment to thousands of people. That has all been changed for the better, and before many years we will see magnificent results from this new policy.

With timber, coal, coke, oil and natural gas, only 250 miles from Lake Erie and 300 from the Chesapeake Bay, excellent railroad facilities and low freight rates, the central section of West Virginia certainly offers many superior advantages to the manufacturer.

ERNEST P. MORRIS.



## Recent Letters on the Business Outlook

Harry Allen, secretary Curtis & Walmsley Co., Limited, real estate, auctioneers and general agents, New Orleans, La., in a letter to the Manufacturers' Record, says: "Undoubtedly many difficulties have been eliminated from the situation, and it only requires a little time for the minds of investors to become accustomed to the changed condition and to realize that there will be a time of general improvement, rather than a retrograde movement which we have heretofore experienced. In our immediate section information leads us to believe that the farmers are in better condition than they have been for many years. They have been working hard and economizing, the result of which is that they are able to pay cash for what they want. Only last week we sold a plantation for cash, and we have more active inquiries for lands than we have ever experienced before. It is a significant fact that Louisiana, which has always been considered less progressive than any other Southern State, has in the past year built more miles of railroad than any other State in the Union except California, and while this may be a coincidence, yet when we consider the number of inquiries we are daily receiving from agents and others looking to the location of colonies, we must at last recognize that this State has caught the spirit of progress, and it is possibly today the most promising field for investments in the entire South. Such a thing as an inquiry for New Orleans real estate or Louisiana lands was unheard of ten years ago, and today there is not a mail that does not bring us a letter from some part of the country inquiring about investments in this city and State, and the so-called promoters are flooding not only this firm, but all other real-estate firms, with letters asking them for properties in this section in exchange for that in many cities and the country. This means better times ahead for our entire section, no one can doubt, and we consider the outlook particularly encouraging and entirely satisfactory."

Alabama Rolling Mill Co., Birmingham, Ala.: "It gives us pleasure to state that we have unbounded confidence in the future outlook, and fully anticipate a growing demand for all manufactured articles after the first of the year. Our business for the present month has considerably passed our expectations, as we have always found this the duller month in the year in our line. While we do not look for any boom, nor care to see one, we think, beginning with the middle or the latter part of January, there will be a steadily-growing consumption in manufactured products, which will tend in the near future to make a corresponding advance in prices. Since the recent election settling the financial question we notice a decided improvement in our collections, and think after the holidays there will be a brisk inquiry for material to replenish broken stocks."

James Powell, president The Wm. Powell Co., steam brass goods and specialties, Cincinnati, Ohio: "Since the presidential election business in our line has considerably improved. The outlook for the coming year is very good. I think we shall have a fairly prosperous season as soon as the usual holiday stock-taking closes. Prices are low and profits quite limited, but stocks throughout the country are pretty generally run down."

The Hanson & Van Winkle Co., acids, chemicals, dye stuffs, nickel and electroplaters' materials, Newark, N. J.: "We have every reason to anticipate an im-

proved and more profitable business for 1897 unless defeated by unwise legislation. We are glad to note the signs of improvement in the South, and hope that your industrial centres will not be backward in taking advantage of technical instruction for their operatives. The Germans, who, more than any others, have given this matter the greatest attention, are reaping their reward by underselling the French and English in the markets of the world. The utilization of by-products is constantly receiving more attention. The remarkable history of cottonseed and products is only one example."

Moore & Handley Hardware Co., hardware and machinery, Birmingham, Ala.: "One of the chief troubles of the country is that our manufacturing interests have outrun the increase in the population, and the normal consumption will not take up the product of the mills running on full time. A surplus always brings confusion and low prices, focusing public opinion on the surplus, and thus causing them to lose sight of the consumption, even though it be normal. Complaints are entered which influence other complaints, and too much talk of this kind produces a bad effect. We believe the South is in as good or even better condition than she has been since the war if she only recognized it."

## Southern Investments.

[Worcester (Mass.) Spy.]

That staid old Southern paper, the Augusta Chronicle, of Georgia, shows now and then a tendency to philosophize. A few days ago, while in that mood, its editor chanced to see his compliment to the blizzard-stricken Northwest quoted in the Manufacturers' Record, of Baltimore, and that paper's comment thereon. The Chronicle had said: "What a plucky people the Northerners are, to have built up such a mighty civilization in such a climate!" The Manufacturers' Record added: "All the more credit to them, with some discredit to us for not having accomplished even more than we have in the development of the South. The South needs to take account of the untiring energy and persistent bustle of the men who have developed 'such a mighty civilization,' despite the natural disadvantages of the Northwest."

Quoting both the foregoing, the Chronicle says:

"We apprehend that the Manufacturers' Record is too intent upon merely material prosperity, and sees in that the chief good to man. The South may be the poorest section in worldly matters, largely due to unfair legislation, but she is probably the happiest, and, in comparison with the West, better off as she is. If our people have no great amount of surplus money, they cannot invest in enterprises any faster than they are now doing. Besides, it is a puzzle for those who are fortunate enough to have cash to spare, to know where to put it profitably, outside of gilt-edged stocks and bonds."

That last sentence tells the story in few words. Wherever in the South the men of small savings have united to start a cotton mill or some other industry, they have generally succeeded in making it pay and in enlarging it from very modest beginnings to a great plant. The chief cause for the South's backwardness in the past twenty years has been that too many of its rich men have not dared to put their money into home enterprises, but preferred to invest it in what they supposed to be "gilt-edged stocks and bonds." They have often found to their sorrow that such securities had an edge, but that it cut the wrong way to suit them. If they would study opportunities

for profitable investments in industrial local enterprises as carefully as they have done the stock reports of the big cities, they would soon know how to place their surplus where it would be safe, bring them reasonable profits, help to make more valuable their real estate and increase the general prosperity of their town, county and State. There is no other section where this can be done to such advantage as in the South. It has beyond all other sections the largest and safest field for enterprise wisely conducted. If any of its people fail to see it, the North does not, and with returning prosperity to the country, vast sums of Northern money will be invested in Southern enterprises that will be managed by experienced men, who will also make their homes in the South.

## Corn at Southern Ports.

[Special Cor. Manufacturers' Record.]

New Orleans, La., January 30.

Grain dealers and railroad men of this city are disposed to meet with facts the theories in the East about the heating of corn shipped through New Orleans, Galveston and other Southern ports. Said a prominent railroad official, in discussing the subject:

"We know that sound corn shipped during the summer even will go through New Orleans in perfect safety. The best informed grain men say that the heating of corn arises from shelling it too early in the season and before the chit is thoroughly dried out, storing it in large quantities in city elevators through the winter months and then shipping in damp, warm weather. It is never hotter in New Orleans in summer than it is liable to be in Chicago, New York, Boston and Philadelphia. Unsound corn, if held for any time in large quantities, will heat in either place; sound corn will not heat in any."

"Much of the corn shipped at New Orleans comes from railroad stations, where, on account of limited storage, it is kept on the cob until the day before shipping, then shelled, shipped through and rapidly passed to the ships, so that it reaches the point of foreign destination before it has a chance to heat, even if the quality were such as to bring about that result in time."

"This talk of grain heating when carried through our Gulf ports, while quite popular with those interested in transportation on Northern lines, is perfectly absurd and unintelligible to men conversant with the general grain trade of the world. The wheat which reaches London from India must be shipped from Calcutta, latitude 20° north, or some point south thereof, be carried at least as far south as latitude 8° north, and then through the whole length of the Red Sea, which is, perhaps, the hottest piece of salt water in the world. The Argentine corn comes out through the mouth of the Plata river, latitude 35° south, and crosses the equator. The wheat from South Russia, Odessa, etc., passes through the whole length of the Mediterranean. The climate of Italy and Spain is such as to make the culture of lemons, oranges, olives, almonds, etc., profitable over very large areas without incurring the risk of frost."

"As it is well known that the longer corn is left on the cob the drier and sounder it becomes, shipments made in May, June, July and August will be as safe as in winter months, and arrangements are being made for heavy corn exports from New Orleans next summer."

If you wish to keep posted on the progress of the South, read the Manufacturers' Record. Price \$4.00 a year.

## RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

## RAILROADS IN 1897.

Important Southern Projects Under Way or Soon to Be Commenced.

The present year promises to see the completion of a number of very important railway lines in the South. Several weeks ago, in its review of railroad construction in this section during 1896, the Manufacturers' Record referred briefly to several of these projects, at that time stating that they were well distributed in the Southern States, and not confined to any particular section. A summary of the more important ones and their present condition will indicate the activity in this direction.

In Maryland the Queen Anne's Railroad, being built by Baltimore capital, is completed to a point beyond the Delaware State line, and will be in operation its entire length between Queenstown and the seacoast, sixty miles, by June 1, if not earlier.

In West Virginia the West Virginia Northern Railroad will doubtless be completed during the coming year by Philadelphia capitalists. It is fifty miles long, and will extend from a connection of the Baltimore & Ohio at Rowlesburg to beyond the northern boundary of the State. The Charleston, Clendenin & Sutton, so the Manufacturers' Record is officially informed, will be extended forty-nine miles further this year, making its total length 100 miles in all. The Condon-Lane Boom & Lumber Co. is constructing a very important line, which will be forty miles in all when completed. Its chief engineer states that twenty miles will be built during the present year. In addition to these are several very important short roads, one of which is a line through the Loup Creek tract, in which a New York syndicate, including Abram S. Hewitt and others, is interested. There are also half a dozen or more lines likely to be under active construction by early summer, not mentioned in this list.

In North Carolina the Browning Lumber Co. is constructing fifteen miles of line and another company sixteen miles, for lumbering purposes. At present Charleston, S. C., is the centre of considerable street railroad building, one electric line being nearly completed by a Baltimore and Charleston syndicate, and negotiations being under way for the construction of two other electric systems in the city.

In Alabama the year will be especially notable for the extent of railroad construction. Work has already begun upon the Mobile, Jackson & Kansas City road, which is completed for a distance of several miles out of Mobile. This will be 160 miles in length, and it is generally understood that English capital is building the line, which will extend into Mississippi. The Mobile & Ohio's proposed extension from Montgomery to Columbus, Miss., 164 miles, is practically assured for immediate construction. In addition to these, Pennsylvania parties are about to construct a 30-mile feeder to the Louisville & Nashville system into the timber tracts near River Falls, while two lines to be built by the Tredegar Mineral Railway Co. and the Tennessee Coal, Iron & Railroad Co. aggregate eleven miles in all, and will open up a rich mineral territory. The Tennessee, Georgia & Atlantic road, in which a number of New York and Atlanta capitalists are interested, it is announced may be built this year between Chattanooga, Tenn.,



and Augusta, Ga., most of the mileage being in Georgia. This line, if built, is to be about 250 miles long.

In Tennessee the railroad line being built by the La Follette Railway Co., of La Follette, will be in operation by May 1, according to official statements. This is twelve miles in length, and will open up a very valuable coal, iron and timber property.

In Kentucky the Kentucky Northern Railroad Co. expects to construct twenty-eight miles of its line, now partially completed, during the present year.

In Louisiana the Union & Northwestern Company, of Farmerville, will complete thirty-one miles of line during 1897. The Baton Rouge & Central Louisiana road is also about to begin operations, and expects to build sixty miles during the present year. The Mississippi & La Fourche Railway Co., of Lauderdale, La., is working on its line, of which thirty-five miles will be built during the present year.

In the Southwest the principal system under construction is, of course, the Kansas City, Pittsburg & Gulf, which it is expected will be completed from Kansas City to Sabine Pass by May 1. This will necessitate the construction of about 175 miles between now and that period.

The St. Louis Southeastern Company, of Whiting, Ark., expects to add twenty-three miles to its road during 1897. The line is now completed for seven miles.

A number of enterprises are being promoted in Texas, among them the Aransas Harbor Terminal road, which it is expected to complete to Harbor Island, on Aransas Pass, during the present year. A Baltimore syndicate is interested in this line. The Marshall, Timpson & Sabine Pass Company will build twelve miles of addition during the present year, while the Gulf & Interstate Railway Co. advises the Manufacturers' Record that 150 miles additional will be constructed during 1897.

A large number of other projects are being considered, and quite a number may be carried out, but the information given above is based upon official advice, and the roads referred to are, as may be noted in many cases, already under construction. They do not, however, by any means represent the full extent of railroad construction in the South during 1897. They only serve to indicate how extensive it promises to be.

#### Little Rock & Memphis Extension.

The plan to build a railroad from Little Rock, Ark., to a connection with the Choctaw, Oklahoma & Gulf road at Wister Junction is meeting with much favor among the business men and others in Memphis and Little Rock. The Merchants' Exchange of Memphis, at a recent meeting, considered the project, and the following resolution was adopted:

"It is the sense of this meeting that it is of vast importance to the growth and prosperity of Memphis and surrounding country that the Little Rock & Memphis Railroad be extended westwardly to Wister Junction.

"We favor the granting of sufficient aid by the county of Shelby; provided, the amount is not beyond the judgment of the county court, as will secure the extension of the said railroad under proper safeguards as will protect the citizens and taxpayers of the county in the collection of any such amount as is subscribed and a reasonable interest on the same, and the location of the general offices and the general shops at Memphis, together with such restrictions, etc., as may be needed to affect the interest of Memphis and Shelby county.

"We respectfully request the honorable county court that it will submit to the people of Shelby county the question of lending its credit to the said enterprise at the earliest practicable time."

The State authorities of Arkansas, as recently announced in the Manufacturers' Record, have been approached on the subject, and a bill is pending in the legislature giving the right to employ convict labor in constructing the proposed road, the State to take bonds of the company in payment for the labor.

#### Charleston's Street Railway Combination.

A dispatch from Charleston, S. C., announces that the negotiations which have been in progress for sometime relative to the control of the Enterprise and City Street Railways by the Charleston Street Railway Co. have been successfully concluded. The Charleston Company was formed about a year ago by Baltimore and Charleston capitalists, and obtained a franchise to build an electric line in the city. The line is nearly completed. The other companies mentioned controlled all the other mileage in the city except a small suburban road two miles long. Several times the idea has been considered of substituting electric motors for animal power on these lines, but no decision was reached. It is understood that the Charleston Company will rebuild the principal portions, if not all the mileage of the roads it has secured, and operate them with the line now being constructed. The Enterprise and City Railways represent twenty-eight miles of track, and the Charleston road eight miles.

When the improvements are completed, every leading city in the South will be provided with electric street railway systems. Philip H. Gadsden, of Charleston; J. S. Lawrence and J. B. Chastain, of Baltimore, are largely interested.

#### B. & O. Electric Service.

The service of electric locomotives on the Baltimore & Ohio system in Baltimore is considered to be a practical success by Thomas Fitzgerald, superintendent of the line. In a recent article prepared for an electrical paper he says:

"For sometime after these locomotives were put in service a great many railroad men, myself included, were skeptical as to the results they would ultimately produce, but from a practical standpoint I am free to say that the electric locomotives operated by the Baltimore & Ohio Railroad on its Baltimore Belt Line are, without question, a perfect success. This latter statement confirms itself by the fact that we are now making additional extensions, which, when completed, will give a total length over which these electric locomotives will operate of about four and one-half miles."

#### New B. & O. Chicago Line.

The Baltimore & Ohio, by its arrangement with the Cincinnati, Hamilton & Dayton, obtains another entrance into Chicago by way of the latter system and the Louisville, New Albany & Chicago road. The Baltimore & Ohio now has three separate—and, for the great portion of the way, distinct—routes to Chicago and the West and Northwest. One of these is via Pittsburg and over the Pittsburg & Western to Chicago Junction; the second via the Central Ohio & Columbus, and the third, the one just inaugurated, via Cincinnati and Indianapolis. The minority stockholders of the Central Ohio are about to bring suit against the Baltimore & Ohio to recover rental claimed to be due them.

#### For Additional Terminals.

According to a dispatch from Norfolk the Southern Railway Co. has decided to increase its terminal facilities at Pinner's Point, and has purchased a tract of land which has 740 feet of water front. It is reported that this property will be used for additional sidings and wharves. The Southern now has berth-room for accommodating a number of the largest steamships at one time, and has a very large storage capacity in its warehouses recently constructed. Its receipts of cotton and other export freight have been very heavy since it made Pinner's Point one of its terminals, and the last purchase shows that it is anticipating very extensive traffic to the seaboard. The land referred to adjoins the property it now utilizes.

#### Mobile & Birmingham's Report.

The annual report of the Mobile & Birmingham Company, the first under its reorganization, has been made public, and shows the following: Receipts, \$294,282.47; operating expenses and interest charges, \$288,384.39, leaving a balance of \$5,898.08. During the year a number of extraordinary items of expense have been incurred, such as extensive repairs to roadbed and bridge work. This was deducted from the earnings also. A large outlay has also been made for rolling stock and buildings, which include a roundhouse at Mobile, costing \$2059, and machine shops costing \$16,304. Its trestle construction cost \$20,000, and its steel rail, to replace the iron, \$69,000.

#### Compressed Air for Locomotives.

A company has been formed at Lexington, Ky., with \$1,000,000 capital, to place on the market an invention of William Hancy, an engineer of the Cincinnati Southern Railway. It is a device for operating locomotives by compressed air. The reservoir, or air retort, which takes the place of a boiler, is charged with compressed air to the extent of 600 pounds. Without being replenished, this supply of air, it is stated, will run the average engine 150 miles, with five or six coaches. The machine is so constructed that the action of the driver recharges the boiler, or air case, compressing the air at the same time.

#### Alabama Coal Contracts.

According to a Birmingham dispatch the Walker County (Ala.) Coal Association, composed of companies in the Warrior river district, has secured contracts for supplying 100,000 tons of Alabama coal to parties in New Orleans and vicinity. The members of the association have obtained a special freight rate from the Southern Railway Co., which, it is stated, will enable the association to underbid the Pittsburg operators in the New Orleans market.

#### Seaboard Air Line's Exhibits

The exhibit of the Seaboard Air Line at the Tennessee Exposition will consist of a display in the main exposition building; also a reception house in the form of a railroad car, to be 200 feet by twenty-four feet and two stories high. On the first floor there will be a large reception-room the entire size of the building, this room to be headquarters for people from the various cities along the Seaboard Air Line. The second story will contain a number of rooms to be used for private reception-rooms.

#### Important Electric Line.

The Baltimore, Middle River & Sparrow's Point Railroad Co. has elected the following officers: President, Daniel Crook; vice-president, Jacob W. Hook;

secretary and treasurer, G. H. Duvall; chief engineer, Col. Charles B. McLean.

This company has been actively engaged in developing the territory in the vicinity of Baltimore by constructing an electric line. It has a franchise to build from the city limits to Sparrow's Point, where the important manufacturing town of Steelton is located, and has completed eight miles of the road.

#### Ohio River & Charleston.

The extensions of the Ohio River & Charleston, from Camden to Sumter, S. C., and from Blacksburg to Spartanburg, S. C., are to be considered by the stockholders at a meeting to be held at the offices of the company at Johnson City, Tenn., on March 30. President Hunt at Cincinnati has issued the call for the meeting. As already noted in the Manufacturers' Record, the company has completed surveys for such extensions. Recently President Hunt and several officers of the company went over the proposed Spartanburg extension.

#### The Tennessee Northern.

The Tennessee Northern Company has elected the following officers: A. A. Glasier, Boston, Mass., president; W. A. Fisher, Lawrence, Mass., secretary and treasurer. This company, as previously stated in the Manufacturers' Record, proposes to build a line in Tennessee from a connection with the Knoxville & Ohio to Jellico. The right of way is through Big Creek Gap, and it is understood that the company will endeavor to form a combination with the La Follette Railway Co., and use the road it is building as a part of the line, which is estimated to be 100 miles long in all.

#### Appointments on the Southern.

General Passenger Agent Turk, of the Southern Railway Co., has issued a circular making the following announcements: J. C. Horton, traveling passenger agent, transferred from Richmond to Baltimore as passenger agent; C. W. Westbury, one of the conductors of the line between Washington and Charlotte, is Mr. Horton's successor; William H. Tayloe, district passenger agent at Norfolk, is made assistant general passenger agent, with headquarters at Louisville, Ky., and J. H. Wingfield, at Washington, goes to Norfolk as district passenger agent.

#### Railroad Notes.

C. M. Ward, of Washington, D. C., has been appointed receiver of the Greenwood, Anderson & Western, nearly completed to Batesburg, S. C.

Mr. I. W. Fowler was re-elected manager at the recent meeting of the Carolina & Cumberland Gap. This road extends from Aiken to Edgefield, S. C.

The powerful locomotives now in use in the passenger service of the Baltimore & Ohio are making some remarkable running records. A train between Baltimore and Washington recently covered eight miles of the distance in five minutes, an average of ninety-six miles an hour.

The Union Railroad Co. of Baltimore, which controls the tunnel operated by the Pennsylvania Railroad in Baltimore, has elected the present officers, who are as follows: B. F. Newcomer, president; Frank Thomson, vice-president; A. W. Hendrix, treasurer, and J. P. Kerr, secretary and auditor.

The New Orleans Commercial Club has elected the following officers for the ensuing year: President, Alden McLellan; vice-president, L. Magruder; secretary and treasurer, Jules E. Brulatour.



## TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

### New England Editors vs. New England Manufacturers.

But the time must come when the labor at the South will be protected by beneficent laws like ours, intended to prevent the existence of large dependent and degraded classes as permanent factors in our make-up. When that time comes, taking climatic conditions and temperaments of the two peoples into consideration, the South, we believe, will be wholly unable to compete with the North. In the meantime, however, manufacturers at the North can largely make up by the superior intelligence and character of their labor, for the competition of the plethora of labor, the lack of organization in it, and the absence of restrictive legislation at the South.—Boston Transcript.

Of how little value are the skill and experience and knowledge of practical manufacturers about their own business when contrasted with the sublime wisdom of some of the daily papers of our country. The Manufacturers' Record is willing to bet that the editor of the Transcript who wrote the foregoing has never been inside of a Southern cotton mill, and we seriously question whether he has ever been inside of a New England cotton mill. The New England cotton manufacturers who have made the vast textile interests of that section, and who ought to know something about that business, have repeatedly told the editor of the Manufacturers' Record that in natural abilities and general adaptability the mill hands of the South are far superior to those of New England, for the simple reason that the large majority of New England mill operatives are French Canadians who have displaced the native Americans, whereas the Southern mill operatives are all natives. One of the leading mill-owners of New England, a well-known Boston millionaire, said to the writer sometime ago:

"To say that our New England mill operatives are superior to the Southern is simply to say that the lower classes of foreigners are superior in natural ability to the native Anglo-Saxons." "Moreover," said he, "I would stake all that I have in the world on my ability to manufacture just as fine goods in the South as are now or ever will be manufactured in New England."

Will the visionary editor of the Transcript put his lack of knowledge against the practical experience and wisdom of such men as the foremost cotton manufacturers of New England? If the Transcript wants information let it interview Mr. Wm. C. Lovering, of Taunton, president of the Arkwright Club, of Boston, or any of the other members of that club who several years ago made a thorough personal investigation of the whole subject.

### Dalton (Ga.) Mill to Add 10,000 Spindles.

The Crown Cotton Mills, of Dalton, Ga., will double its mill this year. The company is now operating 10,000 spindles, and it has been announced that this machinery, together with other necessary complementary equipment, will be

put in. Mr. G. W. Hamilton, president of the company, is quoted in an interview as the authority for this report.

### The New Variety of Cotton.

An interesting description of the wonderful new Jackson cotton recently appeared in the Manufacturers' Record, and it is stated that following the publicity given the prodigy a great many people have made visits to Mr. Jackson's home near Atlanta, and almost 1000 letters have been received by him. At the time the article was written a division of the seed had been made and the future of the new cotton seemed somewhat uncertain. Soon thereafter Mr. J. B. Stewart, an attorney of Atlanta, succeeded in securing the two-thirds of the seed which had been taken away by the Alabama and Texas partners, and they were restored to Mr. Jackson in accordance with a partnership arrangement made with him.

Among those whose interest had been aroused in the matter was Mr. J. D. Ozier, a well-known cotton-raiser of Corinth, Miss. Some years ago he succeeded in producing, by a process of selection and grafting, a very prolific and fine staple cotton, which, under the name of Ozier's cotton, was in great demand, and where carefully cultivated gave extraordinary results. Mr. Ozier proposed to purchase a portion of the Jackson seed and give it a thorough trial on his place near Corinth, the centre of one of the most famous cotton-producing sections of this country. Negotiations have just been concluded, by the terms of which, it is reported, Mr. Ozier pays \$1000 for twenty pounds of the seed. He proposes to make a selection of the perfect seed, which will give him enough for a two-acre patch and will furnish the opportunity for a valuable experiment with the new cotton. Messrs. Jackson and Stewart propose to plant a large portion of the remainder, selling no more except in small quantities.

The results of this year's efforts will be watched with interest everywhere throughout the cotton belt, for enough should be demonstrated by picking time this fall to approximately determine the importance and permanent value of this apparently remarkable variety of cotton.

### Textile Notes.

Mr. Wm. M. Reid, of Bishopville, S. C., contemplates the erection of a small knitting mill, and is now investigating. Information on operation and cost of equipment is now being sought.

It is stated that the Whittier Mills of Georgia, located at Chattahoochee, Ga., intends to double its equipment this year. The company has in operation now 10,000 spindles and 100 braidings.

Messrs. R. E. Simpson, of Chattanooga, Tenn., and A. A. Du Rocher, of Knoxville, Tenn., are negotiating for the purchase of the knitting mills at Barnesville, Ga. They intend to remove the plant to Atlanta.

The Cleveland Cotton Mills, of Lawndale, N. C., has recently completed a new dye-house in connection with its cotton factory. The addition has a capacity of 2500 pounds and seven hands are employed. The dye-house, with equipment, etc., cost about \$8000.

An order of court has been issued for the sale of the Charleston Cotton Mill, at Charleston, S. C., on February 18. The legal proceedings, which delayed the sale from December last, have been settled. The proceedings are now of an amicable nature, and doubtless the affairs of the company will be equably adjusted and operations resumed some time in the near future.

The stockholders of the Victor Cotton

Mills, of Charlotte, N. C., held their annual meeting last week. The old board of directors were re-elected, as follows: Messrs. Geo. E. Wilson, R. M. Oates, M. P. Pegram, S. Wittkowsky, J. D. Church, C. N. G. Butt and J. H. McAden. Mr. Wilson was re-elected president, and Mr. A. C. Hutchison, secretary-treasurer.

### The Importance of Expert Automatic Sprinkler Installation.

The statement has recently been made that in an effort to unwisely economize, some people who desire the benefit of automatic sprinklers purchase the sprinkler heads and then employ local plumbers, without adequate experience in this work, to put up the connections. It is said that this not only endangers the successful working of the sprinkler system, thus to some extent bringing it into disfavor, but that it increases the fire risk, without adequate protection to the insurance companies. Bearing on this subject we have two letters in reply to an enquiry as to the necessity of expert work in the installation of automatic-sprinkler equipment.

Mr. Edward Atkinson, president of the Boston Manufacturers' Mutual Fire Insurance Co., says:

"The right method of putting up an automatic-sprinkler plant is an art by itself, wholly distinct from the art of making the sprinkler head. It requires long study, good judgment and most careful supervision of the work. Those who employ mechanics, who may be good in their way, but who have no experience in this line of business, will be very apt to waste their money and to have their sprinkler service fail in time of need. Not only so, but every sprinkler plant ought to be carefully inspected on behalf of the underwriters after it has been put in position, no matter by whom the work may have been done."

Mr. C. J. H. Woodbury, of Boston, writes:

"In answer to your inquiry of the 2d inst., I will say that while I have not, as a matter of business, had any connection with questions of installation, with results of automatic sprinklers for very nearly two years, yet I have naturally kept my interest in the subject which occupied the majority of my time from the earliest installation of automatic sprinklers in a practical manner until my connection with the underwriters terminated. The fundamental principles of protection by automatic sprinklers holds good, and experiences of the last two years have been in matters of detail. An automatic sprinkler as a device is a very small portion of an automatic-sprinkler system as a protection of property against fire, and whatever the merits may be of such a device, yet the whole might fail to accomplish its proper purpose if improperly installed. It requires a great deal of experience to place sprinklers where they will be sure of affording protection over the whole of a room, especially where there is anything liable to interfere with the force of the spray of the sprinkler. The sizes of the pipes are fully stated in the specifications prepared by various boards of underwriters, but beyond this the questions of water supply, both for the static head and also the secondary pump supplies, require experienced skill for thorough, reliable installation. It might be going too far to state that the companies engaged in the sale and exploitation of automatic sprinklers have a monopoly of this skill, but, on the other hand, many persons who assume to put up automatic sprinklers do not have the experience for the best and even satisfactory work in this direction."

## COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

### The Market for Cottonseed Products.

New York, N. Y., February 2.

The market for cotton oil is scarcely as strong as at date of last letter. Excepting the Mediterranean, which is now showing less interest in cotton oil, there is practically no export demand. The United Kingdom and Northern Europe are for the time out of the market. With regard to the former, good off-yellow is in demand, preferably to prime, bids being on a 22-cent basis. Lard compounders and soap-makers are indifferent to the low prices for cotton oil, primarily owing to the declining market for lard, tallow and greases generally. The unusually active run on pure lard, preferably, and to the decided disadvantage of the compounded article, has contributed to the complete satisfaction of producers and refiners of the former. With the slight difference in price, consumers select the pure lard, with the result that compound lard has been neglected, thus shutting off an otherwise possible demand for cotton oil. Lard rules at 4.12½ to 4.15 cents, and 4.30 for May, with refined at 4.50, and compound lard 4.25 to 4.50 cents. Tallow is quoted at 3½ cents, but it is believed 3¾ cents would prove a trading basis, although 3¾ is the best bid. Under the foregoing conditions, with the additional disadvantage of ocean freights being yet too high to permit of active trading, in view of the apathy of foreign consumers, the outlet for cotton oil is naturally restricted and prices suffer as a consequence. There is no pressure to sell at the mills, it being further reported that many of the latter have shut down, notwithstanding the presence of comparatively light stocks of oil. With present low prices for oil, the mills decline to purchase seed even at the ordinarily low basis offered by the farmers, a circumstance which would indicate a restricted oil output for the season. From the lard refiners 15½ cents is the best bid made to the mills for crude. For prime yellow to arrive 23 cents is asked, and for March delivery 23½ cents. With the temporary stay in production, together with the light stocks in the South, the market points to a stronger basis of values, this view of the situation being emphasized by the probability of lower ocean rates toward the close of February. The principal shipments for the week was 3000 barrels to Trieste and 1200 barrels to Rotterdam. The following are closing prices: Prime summer white, 25 to 27 cents; butter oil, nominal, 25 to 26 cents; prime summer yellow, 22½ to 23 cents; off summer yellow, 22 to 23 cents; prime crude, 19½ to 20 cents; off crude, 15½ to 16 cents; prime crude, loose, 19 to 19½ cents, and soap stock, 5¢. per pound. Cotton oil is firmly quoted at Liverpool at 15/9 to 16/3 per 112 pounds for refined in export barrels.

Cotton meal is quoted here at \$18.50 to \$19 per ton. American cotton cake is firmer abroad, prices ranging from £5 2s. 6d. to £5 12s. 6d. per ton. At auction at Liverpool quay 200 tons of meal were sold at £5 2s. 6d. As the export and home demand continues active, stocks in the country are light. Shipments of seed to Liverpool aggregate 8000 bags.

### Cottonseed-Oil Notes.

The steamship Ernesto cleared from New Orleans last week with 10,292 sacks of oilcake for Liverpool, and the steam-



ship Cluden for Rotterdam with 11,881 sacks of cottonseed meal and other merchandise.

The steamship City of Worcester cleared from Galveston, Texas, last week with 7549 barrels of cottonseed oil and 20,160 sacks of cottonseed meal, with other cargo.

The Planters' Oil Mill, at Helena, Ark., one of the most extensive plants in the State, was sold by order of court on the 29th ult. It was purchased by Mr. E. Urquhart, vice-president of the American Cotton Oil Co., for \$41,000. The mill has not been operated this season.

Cottonseed products at Memphis, Tenn., are unchanged. Cottonseed oil, 17½ to 17¾ cents; prime summer yellow, 19½ to 20 cents, and choice cookery summer yellow, 25 to 27 cents; prime cottonseed meal, \$16 per ton in car lots. Cottonseed in bulk brings \$8 per ton by rail and wagon and \$7 for sacked seed by river.

The railroad commission at Atlanta last week took action which places cottonseed meal and kainit on the same basis as fertilizers. The rate named is class M less 10 per cent. The rate until the 6th of January was class M plus 10 per cent., but on that date the commission made the reduction on fertilizer rates and decided to put cottonseed meal on the same basis.

The market for cottonseed products in Texas is quiet, with prices nominally steady. Prices on crude and refined cottonseed oil are said to be very unsatisfactory, and some mills are refusing to sell, while others have shut down for the season. Prices are very low, with no prospect of improvement in the near future. At Houston, Texas, exchange quotations ranged as follows: Prime crude oil, loose, 15½ cents; refined butter oil, loose, nominal; prime summer yellow oil, 17½ to 18 cents; cake and meal f. o. b. mill at interior points, according to location, \$13.50 to \$15 per short ton; cottonseed hulls, \$3 to \$4.

The market in New Orleans on the 1st inst. was weak and meal and cake easy. Prime crude oil in bulk, 16 cents; prime summer yellow in barrels, 22 cents; meal and cake, \$16.50 to \$17 per short ton and \$18.50 per long ton for export. Receivers' prices were quoted as follows: Cottonseed, \$7 per ton of 2000 pounds net to the mills, no commissions of any kind to be added; cottonseed meal jobbing per carload at depot, \$16.50 to \$16.75 per short ton of 2000 pounds; for export per long ton of 2240 f. o. b., \$18.25 to \$18.50 for current month; oilcake for export, \$18.25 to \$18.50 per long ton f. o. b.; crude cottonseed oil, at wholesale or for shipment, strictly prime, in barrels, per gallon, 17½ to 18 cents; loose, per gallon, 16 to 16½, according to location of mill; refined cottonseed oil, prime, in barrels, per gallon, at wholesale or for shipment, 22½ cents; cottonseed hulls delivered, per 100 pounds, according to location of mill, 11½ to 15 cents; linters, according to style and staple—A, 3½ to 3¾ cents; B, 3¼ to 3¾ cents; C, 2¼ to 2¾ cents; ashes, none.

The Atlanta Textile Manufacturing Co., of Atlanta, Ga., has applied for a charter, placing its capital stock at \$20,000. This company has been in process of organization for some time, and has previously been reported in these columns. The company intends to engage in the manufacture of webbing, back bands and similar goods. The incorporators include Jas. L. Logan, R. J. Griffin, Jas. R. Stephens, Jos. H. Johnson and others, of Atlanta, and George M. Jacobs and Jas. W. Tappin, of New York.

## PHOSPHATES.

### Phosphate Markets.

Office Manufacturers' Record,  
Baltimore, Md., February 4.

The phosphate business is quiet, in sympathy with the lull in other fertilizer material, and manufacturers are awaiting developments before making purchases. The market in South Carolina is quiet, while the development of deposits is progressing as well as could be expected under the present condition of the industry. Prices are nominally steady at \$3 for crude rock at the mines, hot-air-dried \$3.25 Ashley river and \$3.45 Charleston city. The prospects for a better market for Florida rock show no more encouraging features, and miners are still pursuing a conservative course, relying on an actual demand, with a guarantee of a better margin of profit. The production of phosphate rock in Tennessee is limited in character, and no activity in this channel is expected before the late spring or summer months. In the local market receipts of rock are light, and the business of charters for vessels to load at points of production of the same character. In the New York charter market sail tonnage is very dull, owing to scarcity of vessels. In phosphate charters there has been some business, but on the whole the situation is quiet except in grain and cotton charters. The following vessels were placed during the week: A schooner, 291 tons, from Charlotte Harbor to Baltimore with phosphate rock at \$1.80; schooners Nettie Champion, 423 tons, C. C. Wehrum, 376 tons, and Mamie Saunders, 265 tons, New York to Norfolk with fertilizer at 65 cents; schooner Ella F. Crowell, 157 tons, from Barren Island to Boston with phosphate rock at \$1.75 and loaded, and steamer North Gwalla, 1418 tons, from Tampa to the United Kingdom or Continent with phosphate rock on private terms.

### Fertilizer Ingredients.

The late inclement weather has retarded operations in the market for ammoniates, and the week has been rather quiet. Values, however, are generally firm, with late operations mostly with Southern trade. Dealers are generally awaiting the announcement of the new schedule for 1897; hence there is only a slight movement in parcels for forward delivery, while spot goods are firmer. Bone meal and tankage are in fair demand. Blood is quoted \$1.50 per unit f. o. b. Chicago and Kansas City, concentrated tankage \$1.32½ to \$1.35 Chicago and crushed tankage 9½ and 18 at \$14.25 Chicago. Nitrate of soda is firm, with a moderate demand. Messrs. Thos. H. White & Co., in their circular for January, say: "We note for the month past a steady market for ammoniates. The Southern inquiry has been good, and readily absorbed the product of Kansas City and other Missouri river factories. There were also sales at Chicago and New York for shipment South. The cold weather prevailing this week seems to have checked the movement, but prices are firm, and with the return of mild weather we look for an active market."

The following table represents the prices current at this date:

Sulphate of ammonia (gas)...	\$2 25¢	—
Nitrate of soda.....	2 00¢	—
Blood.....	—	1 80
Hoof meal.....	1 65¢	1 70
Azotine (beef).....	1 70¢	1 72½
Azotine (pork).....	1 70¢	1 72½
Tankage (concentrated).....	1 65¢	1 70
Tankage (9 and 20).....	1 65¢	1 67½ and 10
Tankage (7 and 30).....	15 00¢	16 00
Fish (dry).....	20 00¢	—
Fish (acid).....	11 00¢	12 00

### Phosphate and Fertilizer Notes.

The Newberry Phosphate Co. has been incorporated at Ocala, Fla., with a capital of \$25,000. The incorporators are

R. L. Anderson, H. A. Ford and Edward Miller.

The steamer Turret Court sailed from Fernandina, Fla., on the 26th ult. for La Pallice with a full cargo of phosphate rock.

The steamship Linwood for Genoa cleared last week from Savannah, Ga., with 1253 tons of phosphate rock, valued at \$12,530, and other merchandise.

The British steamship Inverness, from Shields, arrived last week at Savannah, consigned to Strachan & Co. She is chartered to load phosphate rock and cotton for Bremen.

An order was signed at Columbus, Ga., last week granting incorporation papers to the W. C. Bradley Co. to manufacture fertilizers. The capital stock of the company will be \$100,000, all paid in.

Statistics of the phosphate industry in the United States for 1896 shows that Florida led with 501,065 tons, followed by South Carolina with 275,060 tons, Tennessee with 42,011 tons and North Carolina with 7418 tons.

The schooner Gertrude Abbott cleared from Charleston, S. C., on the 28th with 817 tons of phosphate rock. The total shipments to domestic ports since September 1, 1896, aggregate 38,357 tons, against 52,107 tons last year.

The French Phosphate Co., which is to locate two new phosphate plants near Newberry, Fla., will employ forty men each. The company has several rich deposits of rock. A number of plants in that section which have been mining steadily for three years or more have about exhausted their supply of rock, and are looking for a new location.

Mr. J. L. Wetherell, a capitalist of Cherokee, Iowa, was in Hamburg, Ark., last week making arrangements to develop the deposits of ochre in Drew county, Arkansas, twenty-five miles north of Hamburg. These ochre beds embrace a tract of several acres in extent, and are claimed to be the richest in the United States. There are three distinct colors, pink, red and yellow, the latter having a vein eight feet thick. The plans of development include drying works and various improved machinery, involving an outlay of \$150,000.

The South American nitrate combination, organized about a year ago to control the production of nitrate, is at present considering new plans for controlling the trade during the coming season. The present agreement extends until March 31, 1898. The output for the present year, that is, from April 1, 1896, to March 31, 1897, was fixed at 20,300,000 quintals, which was about 8,400,000 quintals less than the output for the previous year. While it is proposed to restrict exports, the English companies favor an increase in output to 23,500,000 quintals for the year ending March, 1898. Nitrate is used extensively in Europe for fertilizer purposes, and as the soil of this country becomes exhausted the demand will steadily increase.

The Manufacturers' Record has just received the circular of Messrs. Auchincloss Bros., sole agents for the Dunnellon Phosphate Co. at London, in which a complete record of the shipments of high-grade 75-80 per cent. Florida phosphate rock from 1890 to 1896 is given. The circular, in commenting on the general course of the market for high-grade Florida rock, says: "It is well known that the Florida hard-rock industry has been suffering of late years, and is now suffering, not so much from the competition of high-grade deposits in other countries as from an overproduction by Florida miners alone, due to the fact that shortly after the discovery of high-grade

phosphates in Florida, many, attracted by the promise of large speculative profits and apparently easy facilities for cheap production, engaged hastily in an industry of which they had no previous experience. The steadily-declining markets, and especially the low prices of the past eighteen months, have proved so unprofitable to the miners in Florida that many have been compelled to abandon their undertakings. Also the operations of speculators for a decline, as well as the phenomenal advance in ocean freights during the latter part of the year just closed, have so aided in clearing the situation that we think the hard-rock industry in the future in all probability will be conducted with more regard to ordinary business methods." The circular, in its recapitulation of shipments of Florida rock to the following ports in 1896, gives these figures: To the United Kingdom 22,084 tons, Baltic 89,908 tons, Continental 159,737 tons, Mediterranean 42,479 tons, making 314,208 tons, which, with shipments to domestic ports of the United States of 8663 tons, gives a grand total for the year just ended of 322,871 tons, against 306,046 tons in 1895, 304,079 tons in 1894, 220,216 tons in 1893, 180,018 tons in 1892, 71,682 tons in 1891 and 11,206 tons in 1890.

### Gold-Mining in River Bed.

An interesting feature of the gold-mining activity which it taking place in Georgia is furnished in the operations of the T. M. Birch Mining Co., which is making a handsome profit by sluicing the deposits in the Chestakee river, in Lumpkin county. A correspondent of the Manufacturers' Record writes as follows: "They have secured a 14-mile lease, and are operating a dredging boat of the Marion steam shovel pattern, and at the rate they are now going will work about a mile a year. The dredging boat is fitted with a regular placer sluice six feet wide and ninety feet long. The machine's capacity is a yard to the dipper, and it raises a dipper a minute. The bed is worked to an average depth of nine feet, the deepest workings being fourteen feet, which practically exhausts the deposits. The expenses of all kinds figure about \$20 a day, and the returns are from \$40 to \$75 a day. H. B. Ammens, a Western miner, is superintendent of the work, and the owners are also Western men."

Commenting on the last issue of the "Southern States" magazine, published by the Manufacturers' Record Publishing Co., the Montgomery Advertiser says: "Montgomeryans have special reason for being interested in the February number of the 'Southern States' magazine. Mr. Albert Phenix, the genial representative, will be pleasantly remembered by the many friends he made during his short stay in the city. From his pen comes the leading article of the number, entitled 'The Georgia & Alabama Railroad and Its Territory,' in which over four pages is devoted exclusively to the city of Montgomery—its past, present and future. It is seldom that one finds a writer nowadays who realizes the power of the truth when simply told. The article is a model in this respect, and presents reliable information in an interesting manner. As the magazine has a large circulation in the North and West, such articles as the one by Mr. Phenix cannot but accomplish great good to the city of Montgomery. There are several fine cuts of the buildings and street scenes about the city also."

The Business Men's Club of San Antonio, Texas, has elected Edwin Chamberlain, president; August Briam and E. B. Chandler, vice-presidents.



## LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

## LUMBER MARKET REVIEWS.

## Baltimore.

Office Manufacturers' Record,  
Baltimore, Md., February 4.

The volume of business in the local lumber market has been somewhat restricted by the inclement weather prevailing during the past week. There is, however, no increased demand for lumber, and at the moment the outlook cannot be called very encouraging. Receipts of air-dried yellow pine are moderate, but stocks on hand are fully ample for all requirements. Yardmen and planing mills are only purchasing in small lots to meet present wants, and during the week there has been some inquiry for No. 2 edge, resulting in sales at slightly better figures. Box men are in the market for small quantities of lumber, but other woodworking concerns are making few purchases. The demand for kiln-dried North Carolina yellow pine is improving, and prices are also a shade better for some grades. In white pine the market is quiet and steady, with some inquiry from out-of-town buyers. Among hardwood men the situation shows but little change, and trade in a local way is quiet. Shippers are busy, however, and shipments on orders are being made regularly. Exporters are cautious in their movements, as the markets abroad are at present well supplied. A sample shipment of lumber is about to be shipped to Europe which may open up a market for a special line of material. The exports of lumber for the month of January aggregated 3,500,000 feet, logs of wood 4545 and staves 93,000.

The following list represents the prices current at this date:

[The quotations for yellow pine are for cargo lots, and for all hardwoods the figures indicate values for choice car lots.]

VIRGINIA AND NORTH CAROLINA PINE		
5-4x10 No. 2, kiln dried.....	\$12 50@	13 50
5-4x12 No. 2, kiln dried.....	14 00@	15 00
4-4x10 No. 1, kiln dried.....	15 00@	15 50
4-4x12 No. 1, kiln dried.....	15 50@	16 50
4-4 nar. edge, No. 1, kiln dried.....	13 00@	14 00
4-4 wide edge, No. 1, kiln dr'd.....	17 00@	18 00
4-4x10 & 12, No. 1, kiln dried.....	23 00@	24 00
4-4 No. 1 edge floor, air dried.....	13 50@	14 50
4-4 No. 2 edge floor, air dried.....	10 50@	11 50
4-4 No. 1 12-in. stock, air dried.....	15 50@	16 50
4-4 No. 2 12-in. stock.....	12 50@	13 50
4-4 edge box or rough wide.....	7 50@	8 50
4-4 edge box do. (ord. widths).....	6 50@	7 50
4-4 12-in. rough.....	9 00@	10 00
3/4 narrow edge.....	5 50@	6 50
3/4 wide.....	6 50@	7 50
3/4x9 1/2 and 10 1/2-inch.....	8 50@	9 50
Small joists, 2 1/2-12, 14 and 16 long.....	7 50@	8 50
Large joists, 3-16 long and up.....	8 00@	9 00
Scantling, 2x3, 2x4 and 3x4.....	7 00@	8 00

## WHITE PINE.

1st and 2d clear, 4-4, 5-4, 6-4 and 8-4.....	47 00@	48 00
3d clear, 4-4, 5-4, 6-4 and 8-4.....	42 00@	43 00
Good edge culis.....	14 00@	15 00
Good stock.....	16 00@	17 00

## CYPRESS.

4-4x8, No. 1.....	20 50@	21 50
4-4x8, No. 2.....	14 50@	15 50
4-4x8, 16 feet, fencing.....	10 50@	11 50
4-4x8, rough.....	8 50@	9 00
4-4 rough edge.....	8 00@	
4-4 edge, No. 1.....	16 00@	17 00
4-4 edge, No. 2.....	12 00@	13 00
Gulf, 4-4, Nos. 1 and 2.....	28 00@	30 00
Gulf, 6-4, Nos. 1 and 2.....	31 00@	32 00

## HARDWOODS—WALNUT.

5-8, Nos. 1 and 2.....	65 00@	75 00
4-4, Nos. 1 and 2.....	80 00@	90 00
5-4, 6-4 and 8-4.....	85 00@	95 00
Newell stuff, clear of heart.....	85 00@	100 00
Culls.....	20 00@	30 00

## OAK.

Cabinet, white and red, Southern, plain-sawn and good, 1 and 2, 8 inches and up, 12 to 16 feet long, 4-4.....	30 00@	34 00
Quartered white, Western, 1 and 2 quality, all figured, 6 inches and up wide, 4-4.....	53 00@	55 00
Culls.....	10 00@	15 00

## POPLAR.

Nos. 1 and 2, 5-8.....	24 50@	25 50
Nos. 1 and 2, 4-4.....	28 00@	30 00
Nos. 1 and 2, 6 and 8-4.....	32 50@	33 50
Culls.....	11 50@	12 50

## SHINGLES.

Cypr., No. 1 h'rts, sawed, 6x20.....	6 50@	7 50
No. 1 saps, sawed, 6x20.....	4 75@	5 25
No. 1 hearts, shaved, 6x20.....	6 00@	7 00
No. 1 saps, shaved, 6x20.....	5 00@	

## LATHS.

White pine.....	2 50@	2 75
Spruce.....	2 10@	2 20
Cypress.....	2 10@	2 20

## Charleston.

[From our own Correspondent.]

Charleston, S. C., February 1.

There has been a better volume of business reported during the past week in nearly every avenue of the lumber industry of the port. The mills at Georgetown and other points are now in full operation and report orders more plentiful. Prices continue to show a narrow margin of profit, and quotations are generally firm under the present demand. There is a very fair demand for cross-ties and the railroads are purchasing liberally. In the shingle trade business is fair, with stocks generally ample for the demand and prices steady at about \$4.50 to \$6.50 per thousand, as to quality and condition. The market closed firm on Saturday, with prices as follows: Merchantable lumber, \$14 to \$16 for city-sawn, \$12 to \$14 for railroad; square and sound, \$9 to \$13 for railroad, \$8 to \$11 for raft; dock timber, \$4.50 to \$6.50; shipping, \$8.50 to \$10.50. Shingles are steady. During the week the following shipments were reported: Steamship Agnes for Jamaica with 150,000 feet of lumber; schooner Ira B. Ellams for Barbados with 36,000 feet of lumber, 96,000 staves and 57,000 shingles; schooner Woodward Abrahams for Boston with 500,000 feet of lumber, and for New York schooner Fannie Arthur with 500,000 feet of lumber; steamer Seminole with 8000 feet, and steamer Comanche with 40,087 feet of lumber and other merchandise. The total domestic exports of lumber from this port from September 1 to January 29, inclusive, aggregate 25,543,553 feet, and foreign shipments 749,000 feet, making a total of 26,292,553 feet, against 29,268,310 feet for the corresponding period last year. Yellow-pine lumber freights are firm, with rates to New York \$4.38 to \$4.50 and proportionally for ties; ties, 14 to 14 1/2 cents; dry lumber to Providence, \$4.50. Among the charters reported last week in New York were the following: Schooner Florence Randall, 704 tons, from Charleston to New York with lumber on private terms; cement out, private terms; a British schooner, 168 tons, from Wilmington, N. C., to Port-au-Paix with lumber at \$6.50, and back to New York with logwood at \$3; schooner Alice Phillips, 501 tons, from Charleston to Boston with lumber at \$4.87 1/2, option of ties at 15 cents, and a schooner, 392 tons, from Union Island to New York at \$4.37 1/2.

## Savannah.

[From our own Correspondent.]

Savannah, Ga., February 1.

The month of January showed a fair volume of business in the lumber market here and at adjacent points, and the demand at the moment shows considerable improvement. Manufacturers are more encouraged by the outlook, and it is expected that the volume of trade during the present month will be larger than January. At all nearby milling points there is a fairly active movement, and saw mills are nearly all well supplied with orders. At Cordele the inclemency of the weather has retarded operations in the saw-milling interests, but all the mills are well supplied with orders, while prices continue very low. Operators in that section are of opinion that prices will slightly advance in the spring, and mills are not anxious to close contracts beyond March delivery. Trade with the West is improving, the demand being mostly from car companies and for railroad equipments. The local market closed steady on Saturday as follows: Ordinary sizes, \$11 to \$12; difficult sizes, \$12 to \$13; flooring boards, \$15 to \$22; shipstuffs, \$16.50 to \$20, and sawn ties,

\$10. Among the clearances for the week were the following vessels: Schooner Carrie T. Belano for New York with 425,034 feet of pitch-pine lumber; schooner Margaret A. May for Wilmington, Del., with 364,578 feet; schooner Stephen G. Loud for Newport News, Va., with 407,618 feet; schooner Douglas Gregory for Baltimore with 459,148 feet, and schooner Anna L. Henderson for Boston with 347,643 feet. New York steamers took out 220,428 feet of lumber and 100,000 shingles, and Boston steamer 22,693 feet. The British schooner Lillie cleared for Parahaiba with 142,479 feet of lumber and other cargo. The freight market is steady, with rates unchanged. From this and nearby ports in Georgia rates are \$4 to \$4.50 for a range including Baltimore and Portland, Maine. Railroad ties, basis forty-four feet, 16 cents; timber rates 50 cents to \$1 higher than lumber rates. Among the charters reported in New York last week the following vessels are reported: A schooner, 392 tons, from Fernandina to New York at \$4.37 1/2, and a schooner, 618 tons, from Fernandina to New York with cross-ties at 14 1/4 cents.

## Pensacola.

[From our own Correspondent.]

Pensacola, Fla., February 1.

A fairly active market has ruled during the past week, and timber shippers are in better spirits at the moment, the outlook being of a more encouraging character. Few sales have been reported during the week, and the market continues very steady at former quotations. Holders are not disposed to sell at present figures, but prefer to wait for an advance in prices. The demand for yellow-pine lumber continues very fair, and mills in this section are generally operating at their full capacity. The general trade of the port at this time is in a very healthy condition, and everything is moving along in a most satisfactory way. The number of improvements now in progress cannot fail to have the desired effect upon the commerce of the port and making its facilities for shipping more attractive. There is more inquiry now for the better grades of lumber, and during the week the shipments have been quite liberal in volume. The following clearances were reported: Schooner James Baird for New York with 334,000 feet of lumber; bark Dillbun for Rotterdam with twelve boxes cedar slats and 894,000 feet of lumber; bark Superb for Boston with 3493 cubic feet of hewn cypress timber and 458,000 feet of lumber; schooner Sadie Wilcut for Boston with 267,000 feet of lumber; bark Saro Caino for Genoa with 232,000 feet of sawn timber and 185,000 feet of lumber; bark Nostra Signora del Sacra, Cuore di Gesu, for Leghorn with 290,000 feet of sawn timber and 124,000 feet of lumber; bark Maria Parodi for Cagliari with 8958 cubic feet of oak timber, 357,000 superficial feet of pine timber and 10,000 feet of lumber; bark Cheechina for Venice with 2536 cubic feet of oak timber, 204,000 feet of pine timber and 69,000 feet of lumber. Ocean freights are steady as to rates, with a moderate offering of tonnage. Among the charters in New York last week the following vessels are reported: British bark Kelvin from Pensacola to Rio Janeiro with lumber at or about \$13; schooner R. J. Moulton from Pascagoula to Boston with lumber at \$5.75.

## Jacksonville.

[From our own Correspondent.]

Jacksonville, Fla., February 1.

The week under review has shown a very active market at this port, and for all desirable grades of lumber prices are very steady, with a good demand. The

saw mills in this section have numerous orders on file, and have business enough to keep running until May next. The lumber industry in January was fairly active, and the cross-tie and shingle trade has been quite active, with large shipments expected during February. There is also a better foreign demand for wood and its products, and new markets are being gradually opened up to all good grades of lumber. During the past week the following vessels cleared with lumber cargoes: Schooner Isaac N. Kerlin for New York with 350,000 feet of lumber from the Parrott Lumber Co.; schooner A. B. Sherman for Baltimore with 89,000 feet of cypress and 356,000 feet of yellow-pine lumber; schooner William H. Albury for Hope Town, Abaco, with 15,000 feet of lumber, 5000 bundles of shingles and other merchandise. The schooner Laura Sprague sailed with 405,000 feet of lumber for Boston from H. Heston & Co. The steamer Delaware sailed for Boston with 50,000 feet of lumber and other merchandise. The Clyde steamers to New York are going out with full cargoes. The Algonquin cleared for New York with 400,000 feet of lumber, 3600 cross-ties and 200,000 shingles, and the Seminole with 350,000 feet of lumber, 2600 cross-ties and other merchandise. Freight rates on wood and its products are steady, with a moderate demand for handy-sized vessels. In summing up the business of the month of January the figures given below are worthy of consideration as showing the commercial growth of the port and the decided demand in lumber circles. The collector of customs reports seventeen steamships and twelve sailing vessels entering the port during the month, and the clearances sixteen steamers and fourteen sailers. The coastwise exports of wood and its products were as follows: Pine lumber 7,178,000 feet, cypress lumber 263,000 feet, shingles 3,520,000 and cross-ties 35,450. The foreign exports were 808,095 feet of lumber, 27,000 shingles and 230 bundles of orange-box shooks. The total shipments of all kinds of lumber for the month aggregated 8,256,095 feet.

## Mobile.

[From our own Correspondent.]

Mobile, Ala., February 1.

The movement at this port has been of slightly better volume during the week, and the business for January was as good as could be expected under all existing conditions. The demand for timber is improving, but the movement will not be as great as was expected in December. The European markets continue to show a favorable tone, and prices are steady, but stocks are ample for the present demand. Timber from the Gulf ports sells readily, and with caution on the part of our shippers the market abroad can be kept in a healthy tone. In the local market sawn timber is still quoted at 10 1/2 cents per cubic foot, 40-foot basis, and contracts at 10 1/2 to 11 cents. There is a fair demand for cypress at 5 to 8 cents per cubic foot, according to average. The demand for cedar is light at 20 to 30 cents, according to quality and size. Hewn timber is dull and rather scarce, but would bring 11 to 12 cents per cubic foot on basis of 100 feet average. Contracts are made at 12-cent basis for well-manufactured long-leaf pine. There is no demand for hewn oak or poplar. The movement in lumber is fairly active, and there is a good demand from Central and South America, with an improvement in the trade with Cuba. The clearances during the past week included the following cargoes: Steamer Senior for Hayti with 275,000 feet of lumber; bark Rackel with 375,301 feet, and bark Fides with 339,500 feet, both



for Rosario, A. R.; steamer Sunniva for Bluefields, Nicaragua, with 114,000 feet, and bark Ninevah for Santiago de Cuba with 310,000 feet. The total shipments of lumber from this port since September 1, 1896, aggregate 30,546,971 superficial feet, against 26,947,813 feet for the corresponding period last year. Freight rates continue steady, with rates unchanged; to the West Indies, \$5.50 to \$6; Cuba, north side, \$5.50 in Spanish gold, and south side, \$6 in Spanish gold; rates to River Platte, \$10.50 to \$11, American gold, and Mexico, \$6.50 to \$7. Timber rates to the United Kingdom are 30/ per load for hewn and 97/6 per standard for sawn timber.

#### Beaumont.

Beaumont, Texas, January 30.

An unusually severe cold storm has interrupted in no small degree lumber shipments from the mills in this section. On one day all the mills and planers were obliged to shut down and the yard crews were also obliged to take a lay-off and go in and warm up. Shipments for the past week have, therefore, been rather light, but the aggregate for the month will be in excess of the same time last year, and manufacturers consider the month has made a favorable showing, indicating a good business in prospect for the present year. The general home trade moves sluggishly. Yard stocks have not met with the demands made in December, though the trade has been sufficiently active to maintain the stocks in a reduced condition. Planing mills are enjoying a busy season and are all running regularly. Some improvement is noticed in the movement of shingles, but prices have made no advance. Good stocks are reported at both Beaumont and Orange. Railroad requisitions have not inclined to activity, but have shown a slight increase in inquiry, which millmen are hoping is the forerunner of better business in this line.

The export trade has shown no decrease in the pace which has brought comfort to the millman's heart; heavy shipments are constantly going to Sabine Pass from Beaumont, Orange, Lake Charles and neighboring points, and the trade would be still further increased were there proper facilities for the business.

Several new barges are now being built at Orange to handle the lumber exported from that point. These barges will have a capacity of about 500,000 feet, and are demanded by the growing business, as may be seen from the fact that the Bancroft Mills, of Orange, alone has sent about 1,500,000 feet to Sabine Pass by barge within the past two weeks. The awakening of interest in improvements at Sabine Pass is eagerly watched by all in this section. The reports recently printed in these columns of proposed improvements at Sabine Pass have been confirmed by a message received from Herman Kountz, stating that Kountz Bros. would spend a round million of dollars on their improvements at Sabine Pass.

The congressional committee on river and harbor arrived in Beaumont this morning and were met by committees from Beaumont and Orange, who escorted them to Sabine Pass and Port Arthur.

The necessity for the desired appropriation will be strongly urged, and is well backed by the fact that there are now in port about twenty vessels seeking lumber for the export and coast trade. The Sabine and Neches rivers, which give Orange and Beaumont their outlet to the Pass via Sabine lake, are navigable for the largest vessels. A proper channel through the lake, connecting these rivers

with deep water at Sabine Pass, would afford a relief to the lumber market which would be felt wherever yellow pine comes in competition with our other lumber. The mills in this immediate section are capable of placing upwards of 1,000,000 feet per day at Sabine Pass were proper facilities offered. The benefits to the home market of the heavy export withdrawals are too patent to require further mention, and deep-water improvements for Sabine Pass mean benefits for the lumber interests of the Southwest which no manufacturer can afford to overlook.

Mills in the counties north of here report all running, with good lists of orders on their books. W. F. F.

#### Lumber Notes.

The old barkentine Jennie Sweeny cleared last week from Galveston, Texas, for Pensacola, where she will load timber for Philadelphia.

Mr. J. H. Millender, of Ceredo, W. Va., has purchased a large tract of timber land near Big Stone Gap, and will erect a saw mill for cutting lumber.

The stave shed and dry-kiln belonging to the stave plant of H. H. Banquo, at Erin, Tenn., was burned on the 28th ult. The loss is estimated at over \$1000.

A charter was granted last week to the Shepperd Lumber Co., of Birmingham, Ala., with a capital stock of \$10,000. The incorporators are F. G., Fred I. and F. E. Shepperd.

The foreign exports of wood and its products from the port of Baltimore for the month of January were as follows: Lumber, 3,560,000 feet; staves, 93,000, and logs of wood, 4545.

The steamship Nicaragua cleared from New Orleans last week with 5000 cypress crosssties, and the steamship Cluden for Rotterdam with 1695 pieces of staves and 16,121 feet of lumber.

The Chamber of Commerce at Knoxville, Tenn., is in receipt of a communication from a barrel-head and stave company of Massachusetts relative to the erection of a factory in Knoxville.

At the Charlotte Real Estate Exchange, of Charlotte, N. C., last week the Elliot furniture plant was sold to Mr. E. W. Humphrey, who will take immediate steps to put it in operation.

It is stated that in Preston county, West Virginia, the stave mills are taking the place of saw mills where the large timber has been cut away. These mills are springing up all over the county.

The dry-kilns of the St. Louis Stave & Lumber Co., at Pine Bluff, Ark., were destroyed by fire on the 26th ult., together with 100,000 staves. The loss is estimated at \$5000, partially covered by insurance.

The charter of the Tencha Lumber Co., of Tencha, Shelby county, Texas, was filed on the 29th ult. The capital stock is placed at \$10,000. The incorporators are E. S. Hicks, C. B. Hicks and John T. Garrison.

W. H. Campbell & Son, of Johnson City, Tenn., have located a new steam saw mill on Sinking creek, near that city, and will shortly begin to cut lumber. The mill will have a capacity of 10,000 feet per day.

Recent rains have raised the creeks tributary to the Sabine river in Texas, and millions of feet of pine timber are being floated out to the river and on to Orange. The Cow Creek Tram Co.'s mill, near Salem, Texas, is turning out first-class timber for export.

Mr. J. W. Gaines, of Frankfort, Ky., visited Middlesborough, Ky., last week for the purpose of inspecting the mount-

ain timber, with a view of establishing a spoke and felloe factory. It is stated that he will start his factory in the Novelty Wood Works Building.

It is stated that Mr. J. A. McGregor, of Cleveland, Ohio, has decided to locate a tight-barrel factory at Florence, Ala. Machinery and tools have been ordered, and will be placed in the old bucket-factory building. Mr. McGregor will employ from seventy-five to 100 men.

The Standard Eagle Box & Lumber Co., of St. Louis, Mo., has placed its property and plant in the hands of a trustee. Its liabilities are said to amount to \$100,000. Mr. Barthold Lange, the trustee, will operate the plant and manage the business until the creditors are paid in full.

The receipts of lumber and building material at the port of New Orleans for the week ending January 28 were as follows: Lumber, 1,375,000 feet, and for the season, 37,762,000 feet, against 46,695,000 last year; shingles, 160,000; laths, 289,000; oak staves, 122,800, and cypress staves, 24,000.

The Perkins Lumber Co., of Augusta, Ga., whose saw mills are located along the line of the Central Railroad, are now operating its mills and woodworking plant in Augusta at its full capacity. It is stated that the company has 5,000,000 feet of lumber at its mills and 1,000,000 feet at its yards in the city.

W. E. Cummer, of the Cummer Land & Timber Co., visited Alachua county, Florida, last week looking over the company's timber land. The company's large mill at Jacksonville is nearly complete, and it will have a large force of men at work cutting stock logs. The plant will be one of the finest in the South.

The Nebraska Lumber Co., at Doughty, Texas, is making full time at its mills and has extended its tram into new pineries, where it is getting an excellent grade of lumber. The saw mills along the Trinity & Sabine Railroad are all running. Manufacturers generally complain of the ruinous prices at which sales are made.

Mr. E. T. Davis, of Portland, Ore., and Mr. A. N. Hadley, of Indianapolis, were in Mobile last week acting as appraisers of the valuation of the property of the Peters Lumber Co., destroyed by fire last fall. Mr. Hadley is also assisting in the appraisal of the damage to a portion of the plant of the Dixie Lumber Mills Company.

The receipts of lumber at St. Louis, Mo., during 1896 were 681,276,000 feet by rail, 86,097,900 feet by river, and logs by river 27,757,500 feet, making a total of 795,131,400 feet, against 857,236,865 feet in 1895. Shipments by river for 1896 were 3,638,000 and by rail 391,404,000 feet, making a total of 395,042,000 feet, against 397,852,000 feet in 1895.

The extensive plant of the Stimpson Lumber Co., at New Berne, N. C., was destroyed by fire on the 29th ult. The property destroyed consisted of saw and planing mill, with eight dry-kilns, stables and a large quantity of lumber. The loss is estimated at about \$90,000, with \$30,000 insurance. This was one of the largest and best-equipped lumber plants in the South.

The Calcasieu Export Lumber Co., recently organized at Lake Charles, La., and combining four of the largest mills on the lake, has been chartered, and the first annual election of officers took place on the 27th ult., resulting as follows: W. E. Ramsey, of the Bradley-Ramsey Lumber Co., president; Capt. George Lock, of Lock, Moore & Co., vice-president; Chester Brown, secretary and treasurer; C. A.

Epping, manager. It is stated that negotiations are now on with several European lumber dealers, and it is believed Lake Charles will export some 10,000,000 feet of pine lumber by next June. Sabine Pass will be used as an ocean outlet until deep-water navigation is secured at Calcasieu Pass.

The Penopolis Lumber Co., which is the South Georgia name of the Atlanta Lumber Co., has under construction a logging railroad twenty-five miles long from Penopolis, Ga., into the pine forests. Jacob Colford, who was interested in the Penopolis Lumber Co., has sold his interest there to the Atlantic Lumber Co. and bought the Atlanta plant of the latter concern.

Mr. W. A. Freeman, of Hamburg, Ark., is making a heavy shipment of walnut timber to Europe. He has just started a raft of logs down the Sabine river to Monroe, La., which, together with carloads at other points, will be sent by rail to New Orleans. All the timber comes from Ashley county, Arkansas, and between 3,000,000 and 5,000,000 feet will be shipped from New Orleans to Hamburg, Germany.

The Hines Bros. Lumber Co., of Kingston, N. C., is now building its new lumber plant. The plant will include band mill, planing mill, dry-kilns, etc., and cost about \$30,000. Daily capacity will be 40,000 feet, and sixty-five hands will be employed. Mr. H. C. Riley, of Philadelphia, Pa., is president; W. T. Hines, of Dover, N. C., vice-president, and Lovit Hines, of Greenville, N. C., secretary-treasurer. Some of the machinery is yet to be purchased.

The stockholders of the Beaumont Lumber Co., of Beaumont, Texas, held their annual meeting in that city on the 25th ult. and elected directors as follows: F. L. Carroll, G. W. Carroll, John N. Gilbert, C. L. Wallace, L. H. Pipkin. The officers elected were F. L. Carroll, Waco, president; George W. Carroll, vice-president, and John N. Gilbert, secretary and treasurer. Stockholders of the Nona Mills Co., of Beaumont, also held their annual meeting and elected the following directory: F. L. Carroll, G. W. Carroll, John N. Gilbert, C. L. Wallace, G. R. Ferguson. Officers elected were F. L. Carroll, president; G. R. Ferguson, vice-president, and John R. Gilbert, secretary and treasurer.

The sixth annual meeting of the Arkansas Yellow Pine Manufacturing Association was held at Little Rock last week, and was in every respect a representative one. The morning session was devoted to a discussion on the bill providing for a duty of \$2 per thousand feet on Canadian lumber, now in the hands of the ways and means committee of the national House of Representatives. The members present decided to urge the passage of the bill, and adopted resolutions to that effect. The election of officers was next held, and resulted as follows: John F. Rutherford, Pine Bluff, president; C. W. Gates, Fordyce, secretary, and Max A. Nulsen, Malvern, treasurer. The president was instructed to call a meeting of the association to be held in Little Rock some time in the spring.

The Free Lance, of Fredericksburg, Va., has entered into the thirteenth year of its existence and its tri-weekly edition into its second year. The Free Lance will continue to give the news of the world to its patrons and assist in the promotion of the material prosperity of Virginia and the South. The change in the head of this newspaper from a dark to a white ground for the display of the title, "Free Lance," will be especially noted by its friends.



## MECHANICAL.

### IN A READY-MADE TOWN.

Interesting Enterprise at Vandergrift, Pa., of the Apollo Iron & Steel Co.

Manufacturers, skilled mechanics, homeseekers and students of social economics will observe with interest the de-

the dwellings on the slope and plateau above. The works are five buildings, nearly half a mile in aggregate length, including a converting building 1120 feet long and a rolling mill 800 feet long, with a traveling crane having a capacity of thirty tons. While these were being constructed in 1895-96, the town was laid off upon the plan of Mr. Frederick Law Olmsted.

This contemplated an abundance of

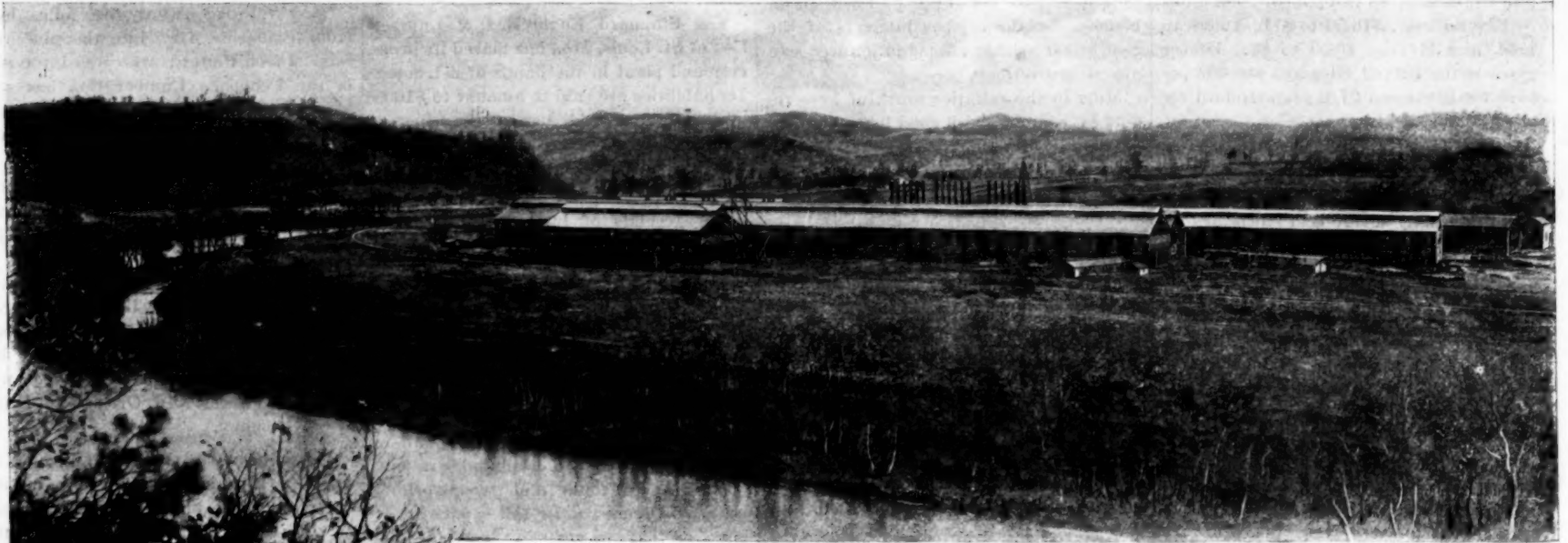
in the public work at its own expense, the residents doing their part when they bought their lots and built their homes.

The company had good men and it wanted more. It knew of no way to secure a steady supply of good men so sure, after giving them work and paying them well, as to help them a little, and no other help was so wise as providing means of helping themselves.

A town planned as Vandergrift is a

lots had been disposed of for \$275,013, the others being held for the general public, the only restriction on titles being that no liquor-selling will ever be allowed.

Starting under such auspices the town must grow. Many of the workmen belong to the region thereabouts, and people for twenty or thirty miles around will be quick to establish friendly and business relations with Vandergrift, which



THE WORKS AT VANDERGRIFT.

velopment of a new town, Vandergrift, Pa., situated thirty-eight miles from Pittsburg, up the Allegheny and Kiskiminetas rivers and on the West Pennsylvania Railroad. It is an enterprise of the Apollo Iron & Steel Co., which had the experience of ten years at Apollo, a short distance away, to guide it in planning the new town.

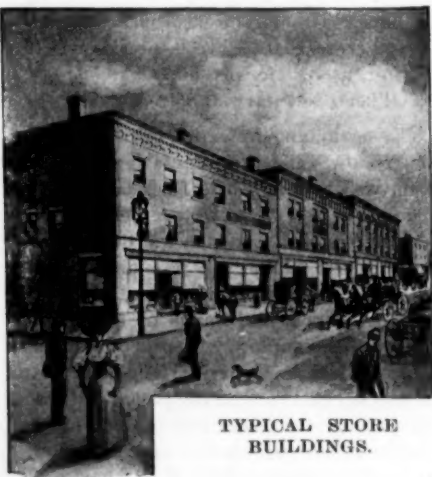
In 1886 it took possession of the galvanized iron business and works at Apollo, and not only developed the first

clean, good water from artesian wells in the hills; sewers under the streets, with all other pipes in the alleys to avoid disturbing the pavements of vitrified brick; parking at convenient intervals, and natural gas and electric lighting. It was

means of helping men, in that it enables them to live comfortably and healthfully without an expenditure of all their earnings. It was intended that the town in the beginning should be for the employees and tradesmen to serve them in

will afford a local market for the farm produce of two counties and will be a place of residence for many persons within its circle of influence when they retire from business. That will create a continuous, active demand for property there which may ultimately threaten to diminish the area of the picnic grove and playground in the rear of the town.

As the first lot was sold less than ten months ago, it is hardly time to make any estimate of development, but a basis for comparison of the present with the future is had in the business-like argument drawn by the company from Apollo. It points to the small importance of the works there in 1886, the limitations for proper extension, and yet to the charac-

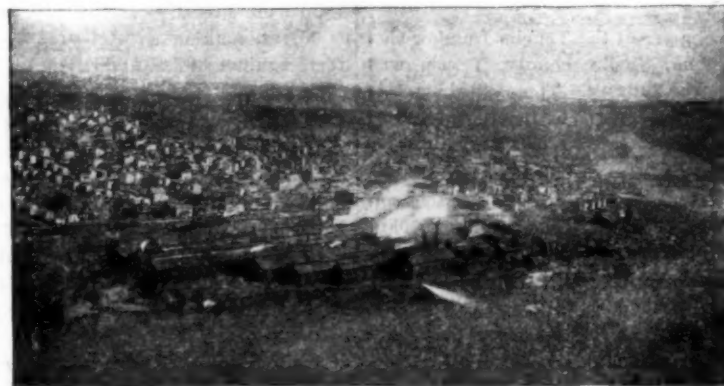


TYPICAL STORE BUILDINGS.

into leadership in the American market, but from time to time added to the capacity of the latter, the town increasing in size in direct proportion, until greater space for larger quarters became essential. The company had never been disposed to engage in any business outside its regular line, but it was compelled to build Vandergrift. To enable its employees and other residents to escape the drawbacks of many mill towns, it determined to make it impossible for them to have anything than health, convenience and comfort. The site selected is picturesque from every point of view, and the works were so placed on a flat along the railroad sufficiently high to be safe from floods as not to mar the prospect from

unusual, if not without precedent, for a town to be created with all such public improvements ready-made. Usually they are the growth of years of endeavor against the inconveniences of mud and dust, bad water, dark thoroughfares and

various ways, but hardly had the plan been announced before there were many business-like inquiries about it. The total number of lots in the plan was 814. Two hundred of these were reserved in the natural business quarter between



APOLLO IN '86.

municipal jobbery adding to the burdens of taxpayers. But the disadvantages of piece-meal construction of works and hap-hazard selection of building sites exemplified in so many manufacturing centres induced the Apollo Co. to engage

the works and the railroad station, and several others for churches, schools and other public buildings. The employees became so anxious to begin house-building that the sale of about 600 available lots was begun last June 8. In one week 276



PROPOSED RESIDENCE STREET.

ter and amount of the output and the contemporaneous increase of size of works and town in ten years. When it began it had strong competition; now it has no competition on equal terms. "If," the company very logically argues, "beginning small and behind at Apollo ten years ago, we got to the front in a few years, with a strong competition, and Apollo grew with us, all the more shall we now, beginning again with the lead at the start, with our product preferred by both consumers and workers in galvanized iron, with readier sale at higher prices on shorter credits, with costs in our favor, with larger resources from current trade, with facilities more than



equal to any possible sale, and the means of extending wonderfully, all the more shall we grow and Vandergrift with us."

#### Improved Telephones.

The illustration shown herewith is an evidence of the constant improvement being made in telephone instruments by the Viaduct Manufacturing Co., of Baltimore.

The desk set, as shown by the cut, is very handsomely gotten up, with nickel-plated stand and polished wood transmitter and hard rubber receiver. The person using this instrument does not require to leave his chair, as is the com-



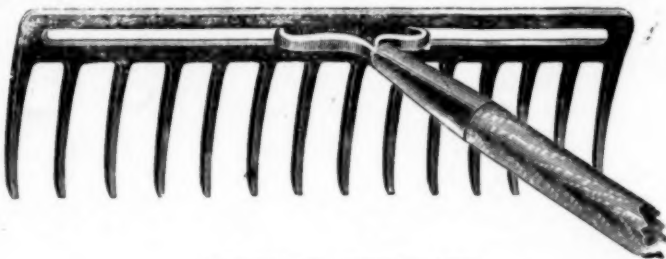
No. 1 DESK SET.

mon mode, but turns to his desk telephone as to his pen and ink. The call bell is located at the side of the desk.

The Viaduct Company is a solid Maryland enterprise, organized twenty-six years ago. It owns the water-power and buildings, machinery and twenty-five acres of land upon which the extensive plant, consisting of twelve buildings, is located, at the Relay Station, Baltimore & Ohio Railroad, between Baltimore and Washington.

#### Weldless Steel Rake.

The demand for a rake calculated to stand hard usage without appreciable wear or damage has led to the introduc-



WELDLESS STEEL RAKE.

tion of the weldless steel rake, shown herewith.

The tool is made from a solid steel plate, the shank being part and parcel of the head, and practically the strongest part of the same. This method of forming the shank gives a double-braced shank formed out of the solid material of the head. The extra strength thus obtained obviates the liability to breakage at the weld.

In this rake there are no welds, rivets or other fastenings to give out or come loose, and the nature of the material overcomes the slightest liability to breakage without positive misuse.

The flat, straight edge of the head also

gives it an advantage when used for leveling off; the shank, being somewhat lower than the head, presents no obstruction whatever.

These rakes will be made in two styles, polished and painted, the shank and ferrule of the former gold bronzed and with first-class ash handles, and will, it is said, be equal in every respect to any forged-steel rake on the market. They are made by Jenkins Iron & Tool Co., Bellefonte, Pa.

#### Economy of Coal Mining by Machinery

From advance sheets of an article which will appear in an early number of the Engineering Magazine the Manufacturers' Record is enabled to gather some interesting facts on coal-handling matters. The author is Cyrus Robinson, an engineer whose experience qualifies him to speak with authority on the questions discussed by this paper. Mr. Robinson has been prominently identified with mining and electrical-machinery manufacturers. Eight years' connection with the Jeffrey and General Electric Companies gave exceptional opportunities to study these problems. His claims will therefore attract serious attention. He is now identified with the J. H. McEwen Manufacturing Co., of New York. From this article we take the following:

"The amount of coal produced in the United States during the year 1895 was 193,117,530 tons, valued at \$197,799,043. Of this, 59,999,337 tons were Pennsylvania anthracite, valued at \$82,019,272, which gives us a production of bituminous coal of 133,118,193 tons, with a value of \$115,779,771 loaded on the railroad cars at the mines. About 25,000,000 tons of this bituminous coal was undercut, or mined by machinery, and on a conservative estimate cost the coal companies to mine ten cents per ton less than that mined by hand, making a net saving of \$2,500,000 by the use of machinery.

"Pittsburg, Pa., is undoubtedly the largest bituminous coal centre in the country, and for illustration the rates and prices obtaining there will serve our purpose. The mining rates agreed upon sometime ago between the coal operators and miners were for pick mining, hand, seventy-five cents per ton; for this sum the miner undercuts the coal, drills and shoots it, and loads it into the mine car, at the face, ready for the driver to take away to the tipple. Where machines are used thirty-eight cents per ton is paid for drilling, shooting and loading, and fifteen cents per ton for undermining the coal

of the balance should be credited to interest and depreciation, the net saving is brought down to the vicinity of ten cents per ton. In itself this makes a good return on the investment, sufficiently so to induce every coal operator to introduce power-mining machinery into his mines. Unfortunately for a large number of them, the machinery has not been invented or manufactured that will cope successfully with all the adverse conditions found in coal mines.

"The electrical system is superior, as a whole, to any other system of transmitting power, affording, as it does, a maximum flexibility and simplicity, rendering it possible to use successfully one generating plant for furnishing power to all parts of the mines. For all purposes, such as coal-cutting, drilling, lighting, pumping, hoisting, haulage, fans, screens, conveyors, etc., the advantages of such a system, with its consequent reduction in the cost of operating the plant, must be apparent at once to the mind of any business man, and it naturally has the effect of causing him to prefer the electrical system to any other. That this is the case is evidenced by the large number of mines in this country operated throughout by electrical machinery. Over \$1,000,000 worth of electrical machinery has been installed in coal mines alone in the United States. Fully 90 per cent. of this was for coal-cutting. At least \$400,000 worth of compressed-air machinery has been furnished for coal-cutting, and the coming year promises to see a still larger business."

#### Iron Markets.

Cincinnati, Ohio, January 30.

The business of the week has been confined in the main to small lots and carloads, though some fair-sized orders have been booked. There is no conspicuous feature marks the period under review. Consumption is about half the normal tonnage, and while slightly expanding, the increase is insufficient to stimulate buying beyond known requirements. Some sagacious buyers feel there is no loss to be feared in providing for future wants at current obtainable figures, and are buying. The furnaces realize that to force sales means concessions in price, which they cannot afford. The general market is therefore a halting one, though the conditions working themselves out give promise of continued improvement, though the development may be slow.

We quote for cash f. o. b. Cincinnati:

Southern coke No. 1 foundry.	\$10 50@10 75
Southern coke No. 2 foundry.	10 00@10 25
Southern coke No. 3 foundry.	9 50@9 75
Southern coke gray forge.	9 25@9 50
Southern coke mottled.	9 25@9 50
Southern coke No. 1 soft.	10 25@10 50
Southern coke No. 2 soft.	9 75@10 00
Belfont coke No. 1, Lake Sup.	12 00@12 50
Belfont coke No. 2, Lake Sup.	11 50@12 00
Hanging Rock charcoal No. 1.	15 00@16 00
Tennessee charcoal No. 1.	13 00@14 00
Jackson Co. silvery No. 1.	13 50@14 00
Standard Alabama car-wheel.	14 75@15 50
Tennessee car-wheel.	13 50@14 50
Lake Sup. car-wheel & mail'e.	14 75@15 25

St. Louis, Mo., January 30.

There is a slightly improved tone in the market which may be born of hope and expectancy, but there has been a better run of orders through the week, though principally small lots. Prospects brighten as the new year advances.

We quote for cash f. o. b. St. Louis:

Southern coke No. 1.	@11 00
Southern coke No. 2.	@10 50
Southern coke No. 3.	@10 00
Southern gray forge.	@9 75
Tennessee charcoal No. 1.	@13 25
Lake Superior coke No. 1.	@14 00
Lake Superior car-wheel.	@15 25
Southern car-wheel.	@15 25
Genuine Connellsville coke.	@4 55
West Virginia coke.	@4 25

New York, N. Y., January 30.

As compared with the complete stagnation of the early days of the month, there is undoubted improvement in the foundry trade. Comparing the status, however, with normal times, things are

extremely quiet. It is probably within bounds to say that the foundries generally through New York, New England and New Jersey are melting not more than one-half the quantity of iron they consumed, say in 1892. If this is a correct estimate, it can readily be seen what a tremendous increase in demand would result from a restoration of business to its normal condition.

The week has not been wanting in signs that a genuine improvement is beginning. These signs, however, are neither distinct nor numerous enough to warrant a prophecy. The expression is frequently heard in this quarter that we must drag along on the bottom until the new administration takes hold. There are good reasons to believe, however, that before March 4 we shall see an undoubtedly better condition than that now prevailing.

Naturally there is some weakness shown in prices when business is offered. The shading, however, has been rather slight and the strong confidence in the future that still prevails keeps the furnaces from making any large concessions. The steadily-growing foreign demand is a factor in steadying prices of all Southern irons. Now that it has been proven without question on the other side that the best Alabama brands are a satisfactory substitute for Scotch pig, the demand has largely increased.

We quote for cash f. o. b. docks or cars New York:

No. 1 X standard Southern.	@11 75
No. 1 X Virginia.	@11 75
No. 2 X Alabama or Virginia.	@11 25
No. 1 soft Alabama or Virginia.	@11 50
No. 1 X lake ore coke iron.	@13 50
No. 2 X lake ore coke iron.	@13 00
Lake Superior charcoal.	@16 35

We quote for cash f. o. b. Philadelphia docks:

No. 1 X standard Alabama.	@11 75
No. 2 X standard Alabama.	@11 25
No. 1 X standard Virginia.	@11 75
No. 2 X standard Virginia.	@11 25
No. 1 X lake ore iron.	@13 50
No. 2 X lake ore iron.	@13 00
Lake Superior charcoal.	15 85@16 35
Standard Georgia charcoal.	16 25@17 00

ROGERS, BROWN & CO.

#### Farming Convicts in Texas.

The recent report of the Texas convict officials shows how the experiment of working prisoners on farms has succeeded in the State. It owns a farm of nearly 3000 acres, of which about 2200 are cultivated. The chief products are cotton and sugar, and the crops for the past two years have been very fine. Sufficient forage is also raised for the livestock, which now consists of nine horses, eighty-six mules, seventy cows, forty calves and 330 hogs. The farm was purchased ten years ago, and the value of the crops raised on it has risen from \$53,582 to \$81,382.

Commenting on this showing the Jacksonville Citizen says:

"In Texas, as throughout the South, the overwhelming majority of the prisoners are men who know no other occupation than farming, and who cannot be profitably trained in any other sort of work. Mechanics and skilled laborers constitute but a small proportion of the convicts. All officials in Texas who have had anything to do with the State farm experiment are earnest advocates of an extension of the policy. The financial agent declares that he is 'strongly convinced that the State would derive great advantage from buying other agricultural land, improved and unimproved, to be worked on State account, placing the negroes along the rich river bottoms and the white forces on the black lands.' He holds that the successful and profitable operation of the State farm at Harlem is a fair example of what might reasonably be expected from other farms located upon lands equally fertile, and with like advantages in the way of transportation facilities."



# CONSTRUCTION DEPARTMENT.

**THE MANUFACTURERS' RECORD** seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

\* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in any town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and even then they must expect the return of some letters, because of the lack of knowledge on the part of postmasters of all new companies. Criticisms and complaints are invited, as they will the better enable us to guard against errors.

## ALABAMA.

Attalla—Distillery, Grist Mill, Cotton Gin, etc.—J. T. Novlin will erect a distillery, as stated last week; also a grist mill, corn mill and cotton gin.\*

Birmingham—Mercantile.—Jonas Schwab and others have incorporated the Jonas Schwab Co., with a capital stock of \$50,000.

Birmingham—Roofing and Paving, etc.—George F. Wheelock, A. M. Wheelock and E. L. Roberts have incorporated the George F. Wheelock Co., with a capital stock of \$10,000, to conduct a roofing, paving and sheet-metal business.

Birmingham—Saw Mills.—The Shepperd Lumber Manufacturing Co. has been incorporated by F. G., Fred J. and F. E. Shepperd, with a capital stock of \$10,000.

Birmingham—Brewery.—J. M. Kinsella, of New Orleans, La., representing Isadore Newman, of New Orleans, is investigating the Birmingham Brewery, in Birmingham, with a view of putting the plant in operation. Enlargements are contemplated, including additions to the ice factory portion.

Birmingham—Steel Plant.—A correspondent writes that the Birmingham Rolling Mills has revived its intention of constructing a steel plant, and offers to build such a plant if Birmingham capital will take half the stock necessary to ensure the success of the enterprise.

Enterprise—Distillery.—J. P. Rawles will build a distillery.

Florence—Saw Mill, etc.—Harry D. Smith, B. P. Larabee and Frank Irvine have organized the Florence Milling & Fuel Co., leased the Leftwich Lumber Co.'s plant and will operate it; will also grind stock feed and cut wood for fuel.

Florence—Buggy Works.—The Florence Buggy Co. has organized, with a paid-up capital of \$25,000, and will establish at once a factory. J. Dillard is president; Mark Rusman, vice-president; B. Paul Larabee, secretary, and J. Fred Fisher, manager. (This is the company under way for past several weeks.)

Florence—Stave Factory.—J. A. McGregor,

of Cleveland, Ohio, will erect in Florence a stave factory to employ 100 men. Tight-barrel staves will be manufactured.

Huntsville—Cotton Compress and Ginnery.—The American Cotton Co. will build in West Huntsville, at a cost of about \$25,000, a cotton ginnery and a compress for compressing cotton into cylindrical bales. For particulars address A. W. Walburn, general manager American Cotton Co., Monadnock Block, Chicago, Ill., or D. C. Ball, president American Cotton Co., St. Louis, Mo.

Magazine—Saw Mill.—The Dixie Mill Co. will rebuild its saw mill reported recently as burned.

Mobile—Barge Company.—The Elevator Coal Barge Co. has been incorporated, with a capital stock of \$50,000, by M. P. Canfield and others.

Mobile—Artificial Lake.—The Spring Hill Lake Co. has been incorporated, with capital stock of \$9000, to construct an artificial lake to supply water for manufacturing purposes, etc.

## ARKANSAS.

Augusta—Mercantile Company.—The Augusta Mercantile Co. has been incorporated by T. E. Stanley, E. G. Thompson, T. J. Stacey and others, with a capital stock of \$20,000.

Benton—Saw Mill and Gin.—E. P. Blakely is erecting a saw mill and cotton gin.

Conway—Investment Company.—The Conway Realty & Investment Co. has been incorporated by W. B. Wilson, George Shaw, S. G. Smith and others, for the purpose of dealing in real estate.

Hamburg—Ochre Mines.—J. L. Wetherell, of Cherokee, Iowa, is making arrangements for the erection of drying works and various improved machinery, at a cost of about \$200,000, for the development of ochre deposits in Drew county near Hamburg.

Van Buren—Electric-light Plant.—The erection of an electric-light plant is talked of. Address the mayor.

## FLORIDA.

Jacksonville—Water Supply.—The city's new standpipe is to be a steel structure 200 feet high, of 300,000 gallons capacity, thirty feet in diameter, and cost about \$17,000. A 2,000,000-gallon reservoir will also be constructed. Address Superintendent Ellis, of the bond trustees, for information.

Jacksonville—Electric-light Plant.—Superintendent Patterson, of the city's electric-light plant, will recommend the expenditure of \$20,000 for increasing the capacity of the plant one-third.

Jacksonville—Livery Company.—P. E. McMurray and others have incorporated the McMurray Livery Stable & Transfer Co., with a capital of \$15,000.

Jacksonville—Towing Company.—Ernest G. Phiney, Wm. R. Thompson and Harold Weston have incorporated the Florida Towing & Lightering Co., with a capital stock of \$50,000.

Gainesville—Harness Factory.—A company has been organized to conduct a harness factory. The Florida Tanning Co. can probably give information.

Newberry—Phosphate Mines, etc.—The Newberry Phosphate Co., recently noted as having applied for charter, has been granted same; purpose, to mine phosphate rock, manufacture, etc.; R. L. Anderson, president; Herbert A. Ford, secretary, and Edward Miller, treasurer; capital stock \$25,000.

Titusville—Telephone Systems, etc.—Charter granted to the Florida Union Telegraph & Telephone Co., capital stock \$5000, to construct a telephone line to Jupiter, a distance of 120 miles; incorporators, E. L. Gauldin, C. H. Walton and E. B. Wager.

## GEORGIA.

Atlanta—Carriage Factory.—E. H. Sherer, 72 Piedmont avenue, Atlanta, Ga., contemplates the location of a carriage factory in the South, but has not yet decided upon the city.

Atlanta—Cotton Mill.—The Atlanta Textile Manufacturing Co. has applied for a charter, placing capital stock at \$20,000. This company has been reported several times in this department, and its intention is to establish a mill for the manufacture of cotton webbing, back bands and similar goods; James L. Logan, manager, 34 East Alabama street.

Atlanta—Bridge.—A resolution has been unanimously passed by the bridge committee

of the city council towards the immediate construction of the Alabama-street bridge. Address the mayor.

Atlanta—Fruit-growers' Union, Ice Factories, etc.—The American Fruit Growers' Union has been organized by John D. Cunningham, of Marietta, Ga.; Willis Brown, of Oregon; F. C. Winthrobe, of Illinois; H. I. Underhill, of New York, and others, and charter has been applied for. The capital stock is \$250,000, with privilege of increasing to \$1,000,000. The company is composed of fruit-growers located all over the United States, and their intention is to handle fruits, own and lease refrigerator cars, cold-storage plants, ice factories, etc.; principal office located at Atlanta. Letters can be addressed in care of Messrs. Garret & Neufville, attorneys.

Atlanta—Bridge.—Regarding the proposed steel bridge across Bell street, the mayor says the improvement is contemplated, but not yet acted upon by the council. It is not known whether the work will be undertaken this year or not; C. A. Collier, mayor.

Augusta—Refrigerator.—B. Lawrence will erect an abattoir and refrigerator.

Augusta—Water Works.—The city council has decided to appropriate \$125,000 for the construction of water works, and the expenditure has been ordered. Plans and specifications will be prepared soon. Address the mayor.

Augusta—Cotton Mills.—Extensive improvements are being made at the Isaeta Cotton Mills.

Augusta—Cotton Compress.—The Union Warehouse & Compress Co., previously reported as organized, continues to contemplate the erection of a cotton compress, and will probably decide definitely as to the plant very soon.

Baldwin—Furniture Factory.—A company is being organized to manufacture furniture. W. D. Lewis can give information.\*

Barnesville—Repair Shops.—J. W. Woodard has established repair shops.

Barnesville—Gold Mines.—E. T. Pound, of Barnesville, has acquired interest of about \$100,000 in gold-bearing lands in Georgia near Tennessee from J. R. Campbell.

Brunswick—Stave Mill.—Keith Webb, of Chattanooga, representing others, will erect a stave mill in Brunswick.

Carrollton—Gold Mines.—It is reported that an English syndicate which acquired recently the Bonner gold mines near Carrollton has ordered a 50-ton plant for crushing the ores. It is said that the company will expend \$250,000 during the year in providing ways for the thorough development of the property.

Chattahoochee—Cotton Mill.—It is stated that the Whittier Mills of Georgia contemplate doubling its equipment of 10,000 spindles; W. R. B. Whittier, resident agent.

Columbus—Grain Elevators, Warehouse, etc.—G. W. Woodruff, Joel Hurt, E. Woodruff and others have incorporated the Empire Mill Co. for the purpose of erecting and operating grain elevators, warehouses, mills, etc. The capital stock is \$100,000.

Dalton—Cotton Mill.—The Crown Cotton Mills, operating 10,000 spindles, will double its capacity. Address G. W. Hamilton, president.

Dublin—Telephone System.—B. D. Evans, Jr., and Louis Cohen, of Sandersville, will establish a telephone system in Dublin.

Dublin—Telephone System.—A \$5000 stock company has been organized by B. D. Evans, Jr., of Sandersville, Ga.; T. J. Arline, of Wrightsville, Ga.; Louis Cohen, of Sandersville, Ga., and others, for the purpose of establishing a telephone system in Dublin; will have from 100 to 150 subscribers, and operate a metallic current. B. D. Evans, Jr., Sandersville, can be addressed.\*

Fitzgerald—Ice Factory.—F. Lyle and J. M. Stansbrough, of Bartow, Fla., will build an ice factory in Fitzgerald. Site has been bought and machinery for twenty-five tons daily capacity. Cold-storage house and bathing pool will be attached.

Fitzgerald—Mattress Factory.—D. D. Wyman and D. W. Gorman will establish a factory for the manufacture of bed springs and mattresses.

Fitzgerald—Cannery and Pickling Factory.—A \$10,000 stock company has been organized to erect the cannery and pickling factory already reported. It is expected to establish a plant of 5000 to 10,000 cans daily capacity, and a pickling plant, at a cost of

\$4000 or \$5000. H. W. Brown, secretary, can be addressed for further particulars.\*

Gainesville—Chair Factory.—G. N. Owen, of Gainesville, and Tillman Cagle, of Bodre, will establish a chair factory.

Resaca—Flour Mill.—Reports have started regarding a new flour mill, and S. H. Brown is mentioned in connection with same.

Rome—Electric-light Plants, etc.—The Rome Lighting Co. has been incorporated by J. L. Bass, R. J. Ragan, S. S. King and others for the purpose of erecting electric-light plants, gas plants, etc. The capital stock will be not less than \$20,000 nor more than \$100,000.

## KENTUCKY.

Ashland—Saw Mill.—Davis & Preston are equipping a saw-mill boat of 18,000 feet daily capacity.

Lancaster—Electric Lighting.—The city is soon to open bids for supplying electric lights for streets, etc. Address W. H. Wherrett, clerk.\*

Lawrenceburg—Flour Mills.—The Lawrenceburg Milling Co. will remodel its roller flour mill and erect a 10,000-bushel grain elevator.

Lexington—Telephone System.—The city council has appointed a committee to investigate and consider propositions made to the city for the construction of telephone lines. Address the mayor.

Louisville—Clothing Factory.—Tom J. Landrum, recently noted as to establish a clothing factory, has, with Leon J. Bamberger, leased the building 224 Sixth street, and will begin at once the manufacture of jeans, kersey, corduroy and cashmere suits and pants; also duck coats. The firm name will be Tom J. Landrum & Co. The building is already equipped with new machinery and will employ nearly 300 operatives.

Louisville—Bridge.—The Board of Public Works is about to open bids for the construction of a bridge across Beargrass creek, recently referred to.

Middlesborough—Woodworking Factory.—J. W. Gaines, of Frankfort, Ky., will establish in Middlesborough a novelty wood works.

Williamsburg—Flour Mill.—John E. Marshall is building a roller flour mill; building is completed, but no machinery put in as yet.

Winchester—Basket-crate Factory, etc.—W. N. Sewell will probably start the manufacture of collapsible lunch baskets, fruit baskets, crates and packing boxes which he has recently patented.

## LOUISIANA.

Alexandria—Bridge.—Congress has granted permission to the Kansas City, Watkins & Gulf Railway Co. for the construction of a bridge across the Red river. Address P. H. Philbrick, chief engineer, Pineville, Ky.

Crowley—Canals, etc.—The Crowley Canal Co. Limited, has been incorporated, with a capital stock of \$25,000, for the purpose of constructing canals, etc. The company acquires the W. W. Duson canal and will improve and operate same. Wm. W. Duson is president; Miron Abbott, vice-president, and Charles Crippen, secretary.

Houma—Water Works.—The city has no plans or specifications as yet as to the proposed water works. Information can be obtained by addressing the mayor, T. C. Dupont.\*

Magnolia Plantation (not a postoffice)—Sugar Mill.—H. C. Warmoth will expend from \$100,000 to \$150,000 in additional sugar mill on his Magnolia Plantation. The present mill has a daily capacity of nearly 500 tons, and this will be increased to 1500 tons by the erection of a seven-foot double mill, crusher, bagasse boilers and other machinery. Letters to Mr. H. C. Warmoth, care of St. Charles Hotel, New Orleans, La., will be forwarded.

New Orleans—Cork Works.—The Southern Cork Works, which were destroyed by fire last week, have secured temporary quarters and resumed operations. Orders are receiving prompt attention.

New Orleans—Boiler Works.—The Louisiana Boiler & Sheet Iron Works Co., Limited, has been incorporated, with a capital stock of \$10,000, for manufacturing boilers and doing general sheet-iron work. The officers are Walter E. Payne, president; Percy J. Stakelum, vice-president, and Frederick L. Joubert, secretary-treasurer.

New Orleans—Land Improvements.—The Southwest Louisiana Land Co. has been in-



corporated, with a capital stock of \$16,000, by Thomas J. Woodward, president; Albert Baldwin, vice-president, and Cartwright Eustis, secretary, and others; purpose, to improve lands, etc.

Rayne—Cotton Gin.—A company with \$2750 capital has been organized to erect a cotton gin; A. L. Chappuis, president, and F. D. Bernard, secretary.

Shreveport—Pork-packing House.—M. S. Cowles is investigating with a view of erecting a pork-packing house.

#### MARYLAND.

Baltimore—Dairy Company.—The Harford County Dairy Co. has been incorporated, with capital stock of \$6000, by John H. Duvall, of Baltimore, and others.

Frederick—Engine Works.—James Sanders, of York, Pa., is conferring with the Business Men's Association relative to establishing in Frederick works for producing gasoline motors, stationary and portable engines, etc.

Frederick—Electric-power Plant.—The Myersville & Catoclin Railway Co. will build a power plant to supply electricity for its railway; Reno S. Harp, secretary.\*

Mountain Lake Park—Ice Factory.—The report of the Mountain Lake Park Co. as to erect an ice factory, reported during the week, was incorrect.

Queenstown—Grain Elevator.—Baltimore parties may erect a grain elevator of 250,000 to 300,000 bushels capacity in Queenstown. W. H. Bosley, North and Fayette streets, Baltimore, can give information.

Sallsbury—Electric-light Plant.—Philadelphia (Pa.) capitalists have decided to erect an electric-light plant in Sallsbury. Site has been selected and machinery of latest modern designs will be installed; no names announced as yet in connection with the enterprise.

Sharpsburg—Cement Mill.—H. A. Jones and J. A. Blundon, of Washington, D. C., have purchased the old Antietam cement mill near Sharpsburg for \$10,000 and will operate same.

#### MISSISSIPPI.

Grenada—Water Works, Sewerage and Electric-light Plant.—The city has decided by popular vote to issue \$40,000 in bonds for the construction of the proposed water works and sewerage system and erection of the electric-light plant; plans and specifications now on file. Address the mayor for further information.

Meridian—Street and Sidewalk Improvements.—Regarding the improvements noted last week, E. H. Dial, mayor, writes that the city will expend \$50,000 in street improvements. A fund of \$30,000 is now on hand for street paving, and \$25,000 for sidewalk paving, the latter work being now under way. In addition to this, the city will continue to expend \$50,000 on sidewalk paving, making \$105,000 altogether to be expended this year.

Okolona—Water Works and Electric-light Plant.—The W. T. Adams Machine Co., of Memphis, Tenn., has received contract for the machinery for the electric-light plant and water works to be constructed at Okolona. Address the mayor.

Yazoo City—Telephone System.—I. H. Barnwell and A. F. Barbour are organizing the Mutual Telephone Co. for the establishing of a system.

#### MISSOURI.

Canton—Creamery.—W. C. Bradshaw and others have incorporated the Canton Creamery Co., with a capital stock of \$4500.

Centropolis—Frog and Crossing Works.—The Missouri Frog and Crossing Works, reported in this issue as burned, will be rebuilt.

Excelsior Springs—Lighting Plant.—The Excelsior Springs Gas & Light Co. has been incorporated, with a capital stock of \$2000, by R. L. Yeager, A. R. Strother and J. B. Forbis, Jr.

Ferguson—Water Works.—The city contemplates securing a water supply. Address James E. Hereford, mayor.

Galena—Lead and Zinc Mines.—W. Foster, late of Eureka Springs, Ark., is in Joplin, Mo., organizing the Morning Star Mining Co. for the purpose of developing lead and zinc deposits on the property of Henry Weyman, near Galena.

Harwood—Coal Mines.—The Keith & Perry Co., of Rich Hill, have optioned coal lands at Harwood and will develop same.

Kansas City—Cigar Manufacturing.—L. Rosin and others have incorporated the Shulman Cigar Manufacturing Co., with a capital stock of \$2000.

Kearney—Flour Mill.—The Holt Milling Co., of Holt, Mo., will remodel the mill at Kearney. Complete equipment of machinery has been purchased.

Malden—Water Works and Electric-light Plant.—The city will construct a system of water works and erect an electric-light plant. Address G. W. Peck, mayor.\*

Perryville—Water Works.—The city does not contemplate water works, as has been reported; but will increase its water supply by water reservoir. Thomas Hovis, chairman of fire committee, has been urging the construction of works, but the authorities seem to think it would be too expensive.

Sedalia—Manufacture.—Endeavors are being made to secure the location of a large manufactory. A. P. Morey can be addressed.

St. Joseph—Creamery Company.—Thomas P. Pattison, R. S. Heff and Eli Marsteller have incorporated the American Creamery Co., with a capital stock of \$800.

St. Louis—Furniture Company.—Cincinnati (Ohio) parties are negotiating through Henry Hiemenz for the erection of a five-story building, 60x105 feet, in St. Louis.

St. Louis—Milling Company.—The Flannagan Milling Co. has been incorporated by J. S. Richardson, George M. Flannagan and others, with a capital stock of \$60,000.

St. Louis—Cap Manufacturing.—Israel Goldberg and others have incorporated the St. Louis-New York Cap Manufacturing Co., with a capital stock of \$2500.

St. Louis—Milton F. Williams and others have incorporated the Williams Patent Crusher & Pulverizer Co., with a capital stock of \$16,000.

St. Louis—Ice and Coal Company.—The Merchants' Ice & Coal Co. has been incorporated by Henry H. Eisenbarth, Joseph E. Dippy and H. J. Esphorst, with a capital stock of \$30,000.

St. Louis—Instrument Factory.—F. W. Brees, J. W. Moore, E. Clements and others have incorporated the Brees-Moore Instrument Co., with a capital stock of \$5000, for the purpose of manufacturing surgical and electrical instruments.

St. Louis—Cigar Company.—George Ganter, G. J. Ganter and others have incorporated the George Ganter Cigar Co., with a capital stock of \$10,000.

St. Louis—Plumbing Company.—The Houser & Doerner Plumbing Co. has been incorporated by Frank W. Houser, D. M. Doerner and others, with a capital stock of \$30,000.

St. Louis—Plumbing Company.—The Houser & Duerner Plumbing Co. has been incorporated, with a capital stock of \$3000, by F. W. Houser and others.

St. Louis—Clothing Factory.—The True Fit Clothing Co. has been incorporated, capital stock \$4000, by James J. Holliday and others.

St. Louis—Manufacturing.—J. W. Byrnes, Edwin Ramsey and W. J. Byrnes have incorporated the Byrnes-Ramsey Manufacturing Co., with a capital stock of \$10,000.

Warrensburg—Ice Factory and Brewery.—Charles P. Anton, of St. Louis, has bought the Gross brewery in Warrensburg and will improve the brewery, adding eight-ton ice machine, etc.

#### NORTH CAROLINA.

Charlotte—Clothing Factory.—The Long-Tate Clothing Co. has been incorporated by W. L. Long and J. D. Tate, of Charlotte, and W. A. Howse, of New York, for the purpose of manufacturing clothing, etc. The capital stock is \$22,500.

Charlotte—Furniture Factory.—E. W. Humphrey recently bought the Elliott furniture factory and will put it in operation. Address care of Charlotte Real Estate Auction Exchange.

Columbus—Machine Shop.—H. E. Gray has established a blacksmith shop.

Greensboro—Merchandise.—The Fishplate-Katz-Rankin Co. has been incorporated by E. R. Fishplate, R. I. Katz and W. R. Rankin to conduct a general merchandise business. The capital stock is \$20,000.

Kinston—Lumber Mills.—The Hines Bros. Lumber Co. is now erecting a band mill, dry-kilns and planing mill; capacity will be 40,000 feet daily, and will employ sixty-five hands; plant will cost \$30,000; H. C. Riley, of Philadelphia, president; W. T. Hines, of Dover, N. C., vice-president, and Lovit Hines, of Greenville, N. C., is secretary-treasurer.\*

Maxton—Electric-light Plant.—A. J. Cottingham is investigating electric lighting with a view of erecting a plant.

New Berne.—G. E. Charlton & Co. have started a machine business.\*

Pollockville—Wire-fence Factory.—E. B.

Elliott Herriott & Co. have started the manufacture of woven-wire fences.

Randolph County—Gold and Silver Mines. Emery & Tucker, of Boston, Mass., have contracted with Fraser & Chalmers, Chicago, Ill., for a large experimental plant, with a daily capacity of thirty tons, to be placed in Randolph county for the development of the Spencer property, which they have recently purchased. Letters addressed to Emery & Tucker, bankers, Boston Stock Exchange, Boston, Mass., will doubtless reach them.

#### SOUTH CAROLINA.

Bishopville—Knitting Mill.—Wm. M. Reid contemplates the erection of a knitting mill.\*

Charleston—Electric Plant.—The Charleston Street Railway Co., lately reported as to erect a power-house, will also put in an equipment for supplying the city with electric lights. Reports say that the entire improvements will cost about \$1,000,000.

Columbia—Bottling Works.—Dozier & Co., 21 Kendall Building, intend to establish a bottling works.\*

Columbia—Warehouse Company.—The Mercantile Warehouse Co. has been incorporated, with William Jones, president, and C. O. Little, manager.

Lancaster—Water Works.—There is some talk of water works being constructed. Address the town council.

Newberry—Woodworking Factory.—The Carolina Manufacturing Co. has been chartered, with capital stock of \$10,000, to manufacture iron and wood articles.

Zeno—Cotton Gin, etc.—G. L. Riddle will erect a cotton gin.

#### TENNESSEE.

Bellbuckle—Telephone and Electric-light System.—The Bellbuckle Telephone & Electric Light Co. will be organized to erect electric-light plant and establish telephone system.

Brownsville—Supply Company.—A \$15,000 supply company will be organized by J. E. Chapman and others.

Chattanooga—Woodenware Factory.—The Benjamin Butter Dish Co. will rebuild at once, at a cost of \$15,000, its wooden butter-dish factory recently burned at Riverview. The building will be 50x100 feet.

Clarksville—Electric-light Plant.—J. N. Alsop, of Owensboro, has received contract for the establishment of an electric-light plant in Clarksville. Address the mayor.

Dyer—Flour Mill.—J. W. Owens and associates will erect a roller-process flour mill.

Franklin—Water Works.—A bill has been introduced in the legislature to give the city authority for the issuance of \$25,000 in bonds for the construction of water works. Address the mayor.

Friendsville—Mineral Developments, etc.—It is reported that W. B. Underwood has leased mineral, oil and gas lands on the farm of P. M. Chapman for development purposes.

Johnson City—Saw Mill.—W. H. Campbell & Son will build a saw mill of 10,000 feet daily capacity; machinery purchased.

Knoxville—Woolen Mills.—The Knoxville Woolen Mills will double its capital stock, as stated last week, and double its mill's capacity by the addition of necessary machinery; capital stock is \$60,000 now.

Knoxville—Barrel Factory.—The Chamber of Commerce is in receipt of a communication from a barrel-head and stave company of Massachusetts relative to the erection of a factory in Knoxville.

Knoxville—Saddlery.—Haynes Bros. have made improvements to their saddlery, adding new machines, etc.

Martin—Water Works.—The city has obtained authority to issue bonds for the construction of water works. Address the mayor.

Memphis—Car-brake Works.—The National Car Brake Co. has been incorporated by A. S. Caldwell, J. C. Neely, H. C. Villipigue, Bolton Smith and T. C. Looney, for the manufacture of brakes for cars.

Russellville—Corn Mill.—S. C. Buck has leased the Cain Mill and will put in machinery for the manufacture of corn goods.

Spring Hill—Creamery.—A report says that Truet & Steele will establish a creamery.

Tennessee—Saw Mills.—The Woodruff Lumber Co., of Murray, Ky., is seeking a site for a hardwood saw mill in West Tennessee or North Mississippi.\*

#### TEXAS.

Angleton—Fire Department.—A volunteer fire company has been formed. J. H. Clark can be addressed.\*

Barstow—Irrigation System.—The Grand Falls Irrigation Co. is soon to resume work

on its canal for the proposed irrigation system. The system will irrigate 30,000 acres of fertile lands when it is completed. The company's capital is \$100,000. William F. Olsen, of Chicago, Ill., is general manager.

Barstow—Agricultural Company.—George E. Barstow and others have incorporated the Enterprise Co. for agricultural and other purposes; capital stock \$10,000.

Corsicana—Soap Factory.—The oil refinery and butchers of the city have annually from 1000 to 3000 barrels of grease to dispose of, and the location of a soap factory is proposed to utilize this product. Local capital is willing to be interested, as stated in our recent report. Correspondence solicited by the Commercial Club.

Corsicana—Oil Wells.—John H. Galy, of Pittsburg, Pa., will drill for oil near Corsicana, so it is reported.

Corsicana—Oil Mill.—It is proposed to form a \$30,000 company to build a cottonseed-oil mill. The Navarro County Alliance can give information.

Dallas—Electric-light Plant.—The city is considering the erection of an electric-light plant, and proposals are being solicited; T. L. Lawhon, city secretary.\*

Dallas—Mercantile.—John S. Hetherington and associates have incorporated the Hetherington & Nason Mercantile Co., with a capital stock of \$40,000.

Dallas—Warehouse Company.—John M. Rorex and others have incorporated the Merchants' Warehouse & Storage Co., with a capital stock of \$5000.

El Paso—Smelter.—It is said that George Fitzgerald has organized a \$100,000 company for the purpose of enlarging and operating the International Smelter.

Forney—Hardware Company.—S. G. Fleming, George Peters, A. F. Duke and others have incorporated the Forney Hardware Co. The capital stock is \$20,000.

Galveston—Sewerage System.—The city will probably construct its own sewerage system. Address the mayor.

Hillsboro—Mercantile Company.—The Goldman Mercantile Co. has been incorporated by D. B. L. and E. Goldman, A. and J. H. Tobolowsky, with a capital stock of \$10,000.

Houston—Municipal Improvements.—Proposed charter changes in the city's organic law, to be submitted to the legislature for consideration, include authority for the issuance of \$250,000 of bonds for street improvements, sewers, schools, etc. Address the mayor.

Houston—Plumbing, etc.—Ernest Necco, J. E. Elsemann and J. B. Collins have organized the Magnolia Plumbing & Heating Co. to conduct plumbing business.

Hutto—Cotton Gin.—Holman & Short have closed contract for the erection of a cotton gin.

Orange—Saw Mills.—The Alex. Glimmer Co. is changing its single saw mill into a double band mill and will be able to operate either a single or double mill; daily capacity will be increased 35,000 feet.

Sabine Pass—Wharfage.—Herman Kountze & Co., of Omaha, Neb., and Sabine Pass, have awarded contracts for the wharves recently reported as to be constructed. The contract calls for the excavation of a slip 180x700 feet, thirty feet deep, and on either side will be wharves eighty-five feet wide and eight feet above ordinary tide. A commercial wharf 200 feet long, equipped with commercial facilities, will also be constructed. Together with improvements to be made by the Sabine Pass & East Texas Railroad, about \$1,000,000 will be expended, it is stated.

San Antonio—Cottonseed-oil Mill.—There is a movement on foot for the erection of a cottonseed-oil mill. R. J. Hand can possibly give information.

Teneha—Lumber Company.—The Teneha Lumber Co. has been incorporated, with a capital stock of \$10,000, by E. S. Hicks, C. B. Hicks and John T. Garrison.

Tyler—Mercantile.—J. P. Whitney and others have incorporated the Whitney Jewelry store, with a capital stock of \$2500.

Tyler—Mercantile.—E. Offenbittel and others have incorporated the Offenbittel Dry Goods Co., with a capital stock of \$10,000.

Waxahachie—Cotton Compress.—The Waxahachie Cotton Compress Co. contemplates the erection of a new press. Address J. L. Strickland, president.\*

Winnie—Dairy Farm.—Herman C. Wheeler, of Jefferson, Iowa, has purchased about 8000 acres of farm lands near Winnie and will establish a large dairy farming business. One thousand Texas cattle will be bought. Butter and cheese will be among the products.



## VIRGINIA.

Big Stone Gap—Saw Mills.—J. H. Millender, of Ceredo, W. Va., has purchased a large tract of timber land near Big Stone Gap and will erect a saw mill for cutting lumber.

Buena Vista—Brick and Tile Works.—The Fire Clay & Roofing Tile Co. has just added new machinery.

Buena Vista—Iron Furnace.—The Rich-Patch Iron Co. is receiving machinery to be used in the improvements to its furnace; company will probably blow in soon.

Clifton Forge—Iron Mines.—E. G. Buck, of Bedford City, Va., has leased a tract of mineral land at Clifton Forge and will open iron-ore beds.

Edenburg—Bridge.—Bids for the construction of a bridge near Edenburg will be received; J. W. Santmier, chairman of committee.\*

Graham—Electric-light Plant and Water Works.—The town purposes to construct water works and electric-light plant. A committee appointed by the council recommends bonding for \$10,000 or more to secure the plants. Address J. B. Greever.\*

Houston—Flour Mills.—The Bannister Mills Co., R. Holt Easley, manager, which recently completed a 50-barrel flour mill, has erected a three-story building 40x50 feet in size, and will put in machinery for 50-barrel flour plant in the spring. Water-power will be utilized. Electricity may possibly be generated for transmission for light and power four miles distant.\*

Littleton—Telephone System.—C. W. Garrett & Co. will construct a telephone line from Littleton to Medoc, a distance of fifteen miles.

Lynchburg—Ice Factory.—The Lynchburg Diamond Ice Co. has been chartered, with capital of \$25,000, by Thomas O'Brien, Jehu Williams, G. A. Barnett, D. P. Morrison and W. T. Berry; company will erect an ice factory.

Mount Jackson—Bridge.—Bids will be received for construction of bridge near Mt. Jackson; J. W. Santmier, chairman of committee.\*

Norfolk—Water Supply.—The city has purchased Joyce lake and intends to utilize same in securing increased water supply. Address the secretary water commission.

Petersburg—Cannery.—George Potts, of Homewood, Va., will remove his cannery to Petersburg.

Portsmouth—Butter-dish Process.—A. B. Griffin has invented a process for manufacturing paper butter dishes, etc.; may organize a company to market the invention.

Portsmouth—Lever-switch Works.—J. F. Gaylord has invented a lever for turning switches automatically and intends to form a company to manufacture same.

Portsmouth—Land Improvements.—The Villa Heights Co. has been organized, with capital stock of \$300,000; John L. Watson, secretary.

Richmond—Cycle Factory.—The Brannan Circle-Cycle Co. has been incorporated, with E. I. Brannan, president and general manager; F. Sitterding, vice-president; J. Clements Shafer, secretary-treasurer, for the purpose of manufacturing the Brannan circle cycle. The capital stock is to be not more than \$20,000 nor less than \$10,000.

Richmond—Ice Factory.—The Consumers' Ice Co. has contracted for the erection of an ice factory with a capacity of twenty tons per day; also erecting a large ice-storage house.

## WEST VIRGINIA.

Benwood—Electric-light Plant.—The Benwood & McMechen Electric Light, Heat & Power Co. has been organized for the purpose of establishing electric-light plants to furnish Benwood and McMechen with lights.

Davis—Coal Mines.—William Coulson has purchased a tract of coal land and will develop same.

Phillippi—Coal Mines.—The Hull Coal & Coke Co. is developing another coal mine.

Point Pleasant.—A. H. Thorp has patented an electro-pneumatic signal, which he will probably manufacture.

Rowlesburg—Stone Quarries.—W. W. Shoch has purchased the Preston county bluestone quarries and will greatly enlarge the plant by putting in new machinery.

Waverly—Tool Company.—The Boyd-Morrison Tool Co. has been incorporated to manufacture iron and steel by Henry P. Boyd and others.

Williamson—Lumber Mills.—W. A. Harris, of White Post, N. Y., has removed his saw mill to Williamson and will set it up at once; will also put in a planing mill.

## BURNED.

Alexandria, La.—The sugar mill of A. S. Burr at Lamorie Station, near Alexandria; estimated loss \$45,000.

Brownwood, Texas.—Brown County Flour Mill; loss \$35,000.

Centropolis, Mo.—The Missouri Frog and Crossing Works; loss about \$40,000.

Cleburne, Texas.—The Cleburne cotton compress.

Columbus, Miss.—The Hatch Building, owned by the estate of Eugene Brooks; estimated loss \$40,000.

Decatur, Texas.—Wise County Mill & Elevator Co.'s flour mill, etc.; loss \$15,000.

Duke, Ga.—Saw mill of W. T. Lott & Co. damaged by explosion; loss \$15,000.

Erin, Tenn.—H. H. Buquo's dry-kilns; loss \$10,000.

Madisonville, Ky.—The Opera House Block; estimated loss \$35,000. Address Jernigan & Ray, owners.

New Berne, N. C.—The saw and planing mill of the Stimson Lumber Co.; estimated loss \$50,000.

Pine Bluff, Ark.—The St. Louis Stave & Lumber Co.'s dry-kilns; loss \$5,000.

Pine Bluff, Ark.—The dry-kilns of the St. Louis Stave & Lumber Co.; estimated loss \$5,000.

Rome, Ga.—J. J. Loeb's meal mill; loss \$5,000.

Sulphur, Ky.—W. C. McMeekin & Co.'s warehouse; loss \$15,000.

Van Buren, Ark.—Merrill Bros.' steam laundry; estimated loss \$2,000.

Van Buren, Ark.—The adamant factory of Wilshire Hynes; loss about \$5,000.

Zenith, Ga.—The storehouse of McCarty Bros.; loss about \$3,500.

## BUILDING NOTES.

Atlanta, Ga.—Business Building.—Hugh T. Inman has bought a tract of land for \$29,000, 16x28x33x100 feet in size, and contemplates the erection on the site of a five-story brick and stone structure, to be used by Douglas, Thomas & Davison as a department store. W. T. Downing, architect, will prepare plans.

Baltimore, Md.—Dwellings.—John Hubner has purchased ground for \$130,000, on which he will build a number of dwellings.

Baltimore, Md.—Buildings.—Charles B. Hakesley will erect three three-story brick dwellings.

Charleston, S. C.—Dwelling.—Benjamin H. Rutledge will build a \$20,000 dwelling after plans by Paul J. Pelz, of Washington, D. C.

Charlotte, N. C.—Building.—Plans have been prepared for the erection of the proposed \$25,000 building for the Mutual Life Insurance Co.

Columbus, Ga.—Dwellings.—The Rose Co. will erect a number of buildings; William C. Bradley, vice-president.

Coopstown, Md.—Church.—The Methodist Episcopal congregation will erect an \$8,000 church building. Address the pastor.

Dallas, Texas.—Sanitarium.—Proposals will be received until March 1 for the construction complete of a three-story and basement building for sanitarium, with heating, plumbing, electric wiring, marble and tiling, etc. Plans can be seen at house of Sisters of Charity of St. Vincent de Paul, St. Vincent Station, St. Louis, Mo., or at St. Joseph Hospital, Garfield avenue, Chicago, Ill.; certified check for \$5,000 required. Address J. R. Gordon and H. A. Overbeck, architects, 250 Main street, Dallas, Texas.

Fairmont, W. Va.—Courthouse.—Plans by Yost & Packard, of Columbus, Ohio, have been accepted for the Marion county's \$150,000 courthouse.

Girard, Ga.—Courthouse.—An election will be held to decide the erection of a \$5,000 courthouse. Address the mayor.

McDonough, Ga.—Courthouse.—Bids will be received until February 23 for erecting the new courthouse. Plans can be seen at office of Golucke & Stewart, Atlanta, Ga. Address H. J. Copeland, secretary commissioners, McDonough.

McMinnville, Tenn.—Courthouse.—Bids will be opened February 15 for the erection of the new courthouse. R. H. Hunt, Chattanooga, prepared plans. Address A. R. Hammer, clerk building committee.

McRae, Ga.—Stores.—W. B. Folsom will build three store buildings.

Micanopy, Fla.—Store.—E. C. Chitty will build a brick store building.

Nashville, Tenn.—City Hall.—A bill has been introduced in the city council asking for an appropriation of \$7,000 for rebuilding

a part of the city hall recently burned. Address the mayor.

New Orleans, La.—Office Building.—The Great Southern Telephone & Telegraph Co. will open proposals February 8 for the erection of its office building; plans and specifications now on file with Sully, Burton & Stone Co.

New Orleans, La.—Dwellings.—Permits issued to Peter Graham for four cottages to cost \$3,600; Mrs. Ellen Gallagher for \$1,250 cottage; Mrs. J. Garnier for \$1,000 cottage; Rev. John Rider for \$1,600 cottage.

New Orleans, La.—Buildings.—Permits have been issued to Omer Villere for the erection of a two-story frame dwelling to cost \$6,500; Mrs. J. A. Sparr for a cottage to cost \$1,000; to the Lutheran Church for a cottage to cost \$2,000; to Mrs. Levy for a double frame cottage to cost \$1,400; to Mrs. Alex Hayes for a two-story frame dwelling to cost \$1,700.

Point Pleasant, W. Va.—Business Block.—J. Friedman & Co. will erect a two-story business block 40x100 feet. Architect Stewart, of Huntington, will prepare the plans.

Queenstown, Md.—Warehouse.—The Queen Anne's Railroad Co. will build a warehouse or houses. W. H. Bosley, North and Fayette streets, Baltimore, can give information.

San Antonio, Texas.—Hotel.—It is proposed to organize a company to build the proposed hotel previously referred to. The structure would cost \$300,000, and plans by Joel De Horvath, of Chicago, have been shown. P. H. Swearingen and others are interested.

Sedalia, Mo.—Business House.—W. S. Epperson has prepared plans for a two-story building, 100x40 feet, to cost \$12,000; owners, Bichel Bros., of Sedalia, and Mr. Otto, of Omaha.

St. Louis, Mo.—Coliseum.—Chas. K. Ramsey has completed plans of the proposed exposition coliseum; structure contemplated is a building with amphitheatre, seating capacity of 7,000, and arrangements for making temporary capacity for seating 5,000 more.

St. Louis, Mo.—Dwellings.—Permits issued to William Cotter for \$5,000 dwelling; H. Muetz, \$5,000 dwelling; Joseph Miner, \$5,000 dwelling; Mrs. Nichol, \$7,500 dwelling; E. A. Steinmeyer, two dwellings to cost \$11,300.

Washington, D. C.—Dwellings.—N. T. Haller has completed plans for an apartment house to be built by local capital. Structure is to be five stories and basement, constructed in a series of six semi-detached pavilions, six flats on each floor, steel beams, steel columns, hot-water heat, gas and electric lighting, baths, electric bells, gas-cooking ranges, electric passenger elevator and freight lift, etc.; total cost about \$150,000.

Washington, D. C.—Georgetown College will build a modern hospital in Georgetown. Rev. H. Richards, S. J., president, Georgetown, D. C., can be addressed.

Washington, D. C.—Building.—S. Kann, Sons & Co. are having plans prepared by Glenn Brown for the erection of a four-story building 21x115 feet.

Washington, D. C.—Dwellings, etc.—N. T. Haller has completed plans for an apartment house 100x90 feet in size, six stories high, with all modern improvements, such as freight and passenger elevators, electric plant, gas and hot-water heat, etc.; the building is to cost \$150,000. S. Kann, Sons & Co. will remodel their building, adding to it another story, etc., with elevators, gas and electric lights, steam heat, etc. Arthur Cowdill and associates will build, it is reported, a \$100,000 lodge building.

Washington, D. C.—Apartment House.—Senator Cameron writes that it is not true that he will build an apartment house in Washington, as reported last week.

Washington, Ga.—Office Building.—Gill Cade is erecting a large office building.

Wheeling, W. Va.—Store and Flats Building.—Contract has been let to Hamilton Bros. by F. M. Work for the erection of a \$9,000 store and flats building.

## RAILROAD CONSTRUCTION.

## Railways.

Atlanta, Ga.—It is stated that the Chattahoochee River Electric road is to be extended to Marietta, Ga., from Bolton, its present terminus. C. J. Simmons is manager.

Augusta, Ga.—W. J. Craig, Edgar W. Mills and others have organized the Augusta Terminal Co. to build a road in the suburbs about two miles long. The capital of the company is to be \$200,000.

Bainbridge, Ga.—It is reported that the Georgia Northern may be built from Bainbridge to Colquitt this year. The distance is twenty miles. C. H. Caldwell, at Bainbridge, is president.

Beeville, Texas.—The people of Live Oak, Texas, are negotiating with the Southern Pacific to secure an extension from Beeville to Live Oak. W. G. Van Vleck, at Houston, is manager of the Southern Pacific.

Blacksburg, S. C.—The Ohio River & Charleston Company has called a meeting for March 30 at Johnson City, Tenn., to consider placing a mortgage to secure funds for extending the line from Camden to Sumter, S. C., and from Blacksburg to Spartanburg, S. C., as proposed. Samuel Hunt, at Cincinnati, is president of the company.

Buckhannon, W. Va.—N. B. McCarty advises the Manufacturers' Record that the road in Webster county he is building will be twenty miles long. It is for carrying timber.

Charleston, S. C.—It is reported that preparations are being made to construct the line proposed between Charleston and Augusta, Ga. It has been chartered under the title of the Charleston & Augusta. The Louisville & Nashville is interested in the project. August Belmont, chairman of the board of directors, 120 Broadway, New York, may be addressed.

Charleston, W. Va.—It is understood that arrangements are being made for the extension of the Charleston, Clendenin & Sutton road to Sutton, the proposed terminus. Gov. W. A. MacCorkle, it is stated, will become general manager as soon as his term of office expires in March.

Chattanooga, Tenn.—J. C. Stanton, who is promoting the Chattanooga & Augusta line, states that he has enlisted a Northern party in the enterprise who will furnish money to build the road.

Crow, W. Va.—It is stated that the Glade Creek & Raleigh has been nearly completed and grading finished the length of the right of way. The road is to be a feeder of the Chesapeake & Ohio. The Beatty Lumber Co., at Crow, is building the road.

Delta, Mo.—It is stated that the St. Louis Southwestern has become interested in a scheme to build a road from Delta to Gray's Point, and that a special company has been organized to construct it. The distance is fifteen miles. S. W. Fordyce, at St. Louis, may be addressed.

Frederick, Md.—Reno S. Harp, secretary of the Myersville & Catocin Railway Co., advises the Manufacturers' Record that work will begin on the line about March 1. Contracts for grading and other work will be let about that date.\*

Frederick, Md.—The company to build the electric line between Myersville and Middletown, Md., is called the Myersville & Catocin Company. Its capital is to be \$100,000. The road will be about five miles long. Chas. D. Eldridge is engineer. Reno S. Harp, of Frederick, is one of the directors.

Fredericksburg, Va.—It is reported that the Virginia, Fredericksburg & Western Company expects to begin work on its line in the spring. It is understood that the road is to extend from a connection with the West Virginia Central & Pittsburg at Davis, W. Va., to the Chesapeake bay, terminating in Eastern Virginia. Hon. Charles H. Gibson, of Easton, Md., is president of the company, and B. H. Robinson, of Lancaster, Va., one of the promoters.

Knoxville, Tenn.—The Tennessee Northern Company has elected A. A. Glasier, of Boston, president, and W. A. Fisher, of Lawrence, Mass., secretary and treasurer. This company proposes to build from a connection with the Knoxville & Ohio road through Big Creek Gap to Jellico, Tenn. The estimated distance is 100 miles.

Memphis, Tenn.—The Merchants' Exchange of Memphis has adopted resolutions favoring the proposed extension of the Little Rock & Memphis road from Little Rock, Ark., to a connection with the Choctaw, Oklahoma & Gulf. The Exchange wishes the county to vote on a bond issue in aid of the project. H. L. Brinkley, of Memphis, is one of the promoters.

Norfolk, Va.—It is rumored that another railroad company is to enter Norfolk, and is negotiating for the purchase of property on tidewater controlled by H. L. Page, of Norfolk.

Norfolk, Va.—It is stated that the Southern Railway Co. has bought additional land at Pinner's Point on the harbor and will construct a number of sidings upon it. W. W. Finley, 1300 Pennsylvania avenue, Washington, D. C., is vice-president.

Pelzer, S. C.—It is stated that a railroad may be built from Pelzer to Abbeville, connecting with the Seaboard Air Line at the latter place. The Pelzer Manufacturing Co. is reported as interested in the matter. The distance is about thirty-five miles.

Queenstown, Md.—The Queen Anne's Railroad has been graded to Ellendale, Del.,



within sixteen miles from its termination, Lewes, Del., on the seacoast. The track is laid nearly to Denton, Md. J. W. Troxel, at Queenstown, is chief engineer.

Raleigh, N. C.—Bills have been introduced in the legislature to incorporate the Tar River & Carolina and the Wilmington & Powellton Railroad Companies.

Raleigh, N. C.—The legislature has passed the bill incorporating the Stone Mountain Railroad Co. The company is allowed to construct 100 miles of line. G. W. Hinshaw, at Winston-Salem, is interested. The route is through Ashe and Watauga counties to connect with the Virginia & Tennessee Railroad.

Rowlesburg, W. Va.—It is reported that contracts have been partly let for the West Virginia Northern road, to be built along the Cheat River valley. J. J. Stoer, of Philadelphia, one of the promoters, is at Parkersburg, W. Va., temporarily. Hon. George C. Sturgiss, of Morgantown, W. Va., is president of the company. The road, it is understood, is to be an extension of the Kingwood, Tunnelton & Fairchance, already built between Kingwood and Tunnelton. The extension is calculated to be fifty miles long.

Sabine Pass, Texas.—It is stated that the Sabine & East Texas branch of the Southern Pacific system will be extended to the proposed docks of Kountze Bros. near Sabine Pass. W. G. Van Vleck, at Houston, Texas, may be addressed.

Strasburg, Va.—It is stated that a movement is on foot to build a line from Strasburg to a connection with the West Virginia Central & Pittsburg road. The line would pass through Hardy and Grant counties, in West Virginia. S. A. McMechen and A. W. Seymour, of Moorefield, W. Va., and E. W. Grove, of Petersburg, W. Va., are interested.

Valdosta, Ga.—It is stated that the road projected from Valdosta to the Ocmulgee river has been completed between Pinebloom and the river, four miles. Gray & Gatchel, of Pinebloom, Ga., may be addressed.

Washington, D. C.—It is reported that parties acting for the Norfolk & Western have secured property for terminals on the Potomac river opposite Washington, to be used when the proposed branch from Front Royal, Va., to Washington is built. Henry Fink, at Philadelphia, is president.

#### Street Railways.

Charleston, S. C.—It is reported that the Charleston Street Railway Co. has secured control of the City and Enterprise systems and will change them into electric lines. The Charleston road is nearly completed. J. S. Lawrence is managing director of the Charleston Company, and J. B. Chastain, of Baltimore, also one of the directors. The Enterprise and City Railways are twenty-eight miles long combined.

New Orleans, La.—The Canal & Chalborne Street Railway Co. is considering an extension of its electric line into St. Bernard parish. J. H. De Grange, manager, may be addressed.

#### Machinery, Proposals and Supplies Wanted.

**Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.**

Belting, etc.—The Hines Bros. Lumber Co., Kinston, N. C., will need belting and shafting; also pulleys.

Belting and Shafting.—Wanted, good second-hand belting and shafting for power elevator; must lift 2000 pounds. Address "Mechanic" 132, Sun Office, Baltimore, Md.

Boiler.—Wanted, at 513 West Lexington street, Baltimore, Md., a fifteen to twenty horse-power boiler.

Boiler and Engine.—The Woodruff Lumber Co., Murray, Ky., will need a forty to fifty horse-power engine and boiler; second-hand will do.

Bone Mill.—See "Phosphate Machinery."

Bottling Equipment.—Dozier & Co., 21

Kendall Building, Columbia, S. C., want to buy equipment for bottling works.

Bridge.—The board of public works, Louisville, Ky., will receive sealed proposals until February 15 for the construction of the Breckenridge street \$8228 bridge across Beargrass creek, recently noted in these columns; J. H. Hoertz, secretary.

Bridges.—Bids will be received not later than February 23 for the construction of two bridges across the Shenandoah river, one near Edenburg, Va., to be 245 feet long, sixteen feet wide and twenty-six feet above low water; the other, near Mt. Jackson, to be 195 feet long, sixteen feet wide and twenty-six feet above low water. Address J. W. Santmier, chairman of committee on bridges, Edenburg, Va.

Building Equipment (Hotel).—The Monticello Realty Co., D. Lowenberg, president, Norfolk, Va., is ready to consider heating, electric-light plant, elevator, laundry plant, kitchen outfit, refrigerating plant and other equipment necessary for its \$750,000 hotel, now building.

Cannery and Pickling Machinery.—Company at Fitzgerald, Ga., wants prices on equipment for cannery of 5000 to 10,000 cans capacity, and on pickling plant. Address H. W. Brown, secretary. (Previous notice of this item made several days ago.)

Cement, etc.—Proposals will be opened February 11 for furnishing cement, stone, ballast, etc., at Fort Morgan, Ala. Address Wm. T. Russell, major engineers, Mobile, Ala.

Cooking Machinery.—See "Building Equipment" above.

Cotton Compress.—The Waxahatchee Cotton Compress Co., Waxahatchee, Texas, is ready to receive propositions on the erection of a new cotton compress.

Cotton Gin.—J. T. Novlin, Attalla, Ala., will want a cotton gin next fall.

Cotton Gin.—Boone & Alford, League City, Texas, want to buy cotton gin.

Crusher.—C. B. Lanham, Culmerville, Pa., is in the market for a stone crusher, with boiler and engine to drive same, and a three or three-and-one-half-inch steam drill; second-hand in first-class order preferred.

Crushing Mill.—See "Phosphate Machinery."

Drills.—C. L. Moses & Co., Welch, W. Va., want to buy a core drill for prospect work, to drill 300 or 400 feet; do not want the regular diamond drill machine.

Drills (Stone).—See "Crusher" above.

Electric Lighting.—Bids will be opened March 1 for supplying Lancaster, Ky., with electric lights. Address W. H. Wherritt, clerk. (See advertisement in Manufacturers' Record.)

Electric-light Machinery.—R. T. Ghent, Dothan, Ala., wants to buy three-wire dynamo to operate fifteen or twenty arc lights of 1200 candle-power and 400 incandescent lamps of sixteen candle-power.

Electric-light Plant.—The city of Malden, Mo., will receive bids until February 18 for the erection of an electric-light plant and construction of water works. Address G. W. Peck, mayor.

Electric-light Plant.—See "Building Equipment" above.

Electric-light Plant.—The city of Dallas, Texas, will receive proposals until March 1 for plans and specifications and erection of electric-light plant of 400 arc lights (double), 2000 candle-power; 1000 incandescent lights, thirty candle-power; eighty miles of wire, in four circuits; necessary boiler power, engine power, poles, etc. Address T. L. Lawhon, city secretary, Dallas, Texas.

Electric-light Plant.—See "Water Works."

Electric Plant.—See "Railway Equipment."

Electric Machinery.—The Bannister Mills Co., R. Holt Easley, manager, Houston, Va., wants information concerning the transmission of electricity for lights and power, to be generated from water-power; estimates on plants, etc., desired.

Electric Novelties.—M. Timmons Walker, 907 Noble street, Anniston, Ala., wants descriptive pamphlets and prices on all kinds of electric fans and motors for 500 volt direct current.

Elevator.—See "Building Equipment" above.

Engine.—See "Saw Mill."

Fire-department Apparatus.—Company formed at Angleton, Texas, wants prices on hose carts, hose, hook-and-ladder trucks, chemical engines, etc. Address J. H. Cart, Box 78.

Flour Mill.—The Bannister Mills Co., R. Holt Easley, manager, Houston, Va., will probably be in the market for a 50-barrel flour mill, roller process, in the spring.

Furniture Machinery.—See "Woodworking Machinery."

Gasoline Engine.—John W. Morgan, River-ton, Va., is in the market for a ten or twelve horse-power gasoline engine to grind wheat and corn. Second-hand machine in good condition will do.

Gasoline-light Plant.—Proposals will be opened February 23 for the erection of a gasoline-lighting plant. For particulars address William Thompson, treasurer National Soldiers' Home, Va.

Grist Mill.—J. T. Novlin, Attalla, Ala., wants equipment for grist mill at once.

Heating and Ventilating Plant, Filter, etc. Proposals will be opened February 26 for installing in United States postoffice building at Washington, D. C., a boiler plant, low-pressure steam-heating and ventilating apparatus, filtering plant, etc. Address Wm. Martin Aiken, supervising architect, Washington, D. C. (See advertisement in Manufacturers' Record.)

Heating Plant.—See "Building Equipment" above.

Hoisting Engine.—C. B. Lanham, Culmerville, Pa., is in the market for double drum hoisting engine, stone crusher, with boiler and engine to drive same, and one three or three-and-one-half-inch steam drill; second-hand in first-class order preferred.

Hydraulic Rams.—The Salisbury Supply & Commission Co., Salisbury, N. C., is in the market for hydraulic rams.

Ice Plant.—See "Building Equipment" above.

Knitting Mill.—Wm. M. Reid, Bishopville, S. C., wants information on knitting mill, estimate on machinery, etc.

Laundry Equipments.—Gowan Dusenbery, Concord, N. C., wants addresses of manufacturers of steam laundry equipments.

Laundry Machinery.—See "Building Equipment" above.

Lithographing Work.—The Salisbury Supply & Commission Co., Salisbury, N. C., is in the market for stock certificates, lithographed.

Machine Supplies.—G. E. Charlton & Co., New Berne, N. C., want prices on machine supplies.

Machine Tools.—George H. Lowell, Dalton, Ga., wants to buy 30-inch engine lathe, 30-inch upright drill, second-hand. Quote dealers' prices.

Machine Tools.—George Cornell, 1819 North Fifth street, Philadelphia, Pa., wants a seven-foot boring mill, new or second-hand.

Match Machinery.—Ben H. Harvin, Burke, S. C., wants addresses of makers of match machinery.

Oil Machinery.—W. C. Newman, Ellerson, Va., wants full information regarding the manufacture of sassafras oil, cost of machinery, probable profits, etc.

Oil-mill Machinery.—Ben H. Harvin, Burke, S. C., wants addresses of makers of machinery for cottonseed-oil mills.

Phosphate Machinery.—The Portland Chemical & Phosphate Co., Albion, Fla., wants to buy a medium-sized mill for grinding bones into meal.

Pipe, etc.—The Hines Bros. Lumber Co., Kinston, N. C., will need pipe and pipe fittings.

Pumping Engine.—Proposals will be received until February 15 for the erection of a pumping engine of 1,500,000 United States gallons capacity in twenty-four hours; specifications ready. Address W. W. Treat et al., water commissioners, Asbury Park, N. J.

Rails.—Morton & Smith, 506 Law Building, Baltimore, Md., want to buy about 1300 yards of 12 or 14-pound rails, second-hand in good condition, for relaying.

Railway Equipment.—The Myersville & Catoctin Railway Co., Frederick, Md., Reno S. Harp, secretary, will want 550 tons of rails, new or second-hand; one combination car, summer car, two motors, fifty horse-power each; several freight cars, etc., for railway five miles long; will also want bids on trestling, grading, etc.; engine for power-house to be 150 to 200 horse-power, and generator 150-kilowatt, two armatures.

Railway Equipment (Tram).—D. M. Bradham, Packsville, N. C., wants a small tram engine and some rails for same.

Roofing, etc.—J. T. Novlin, Attalla, Ala., wants corrugated iron.

Saw.—J. T. Dicks, Bede, Ga., wants to buy 26-inch saw, cut-off, mandrel, etc.

Saw Mill.—George H. Lowell, Dalton, Ga., wants to buy a new band-saw mill of 15,000 feet daily capacity. Quote dealers' prices.

Saw Mill.—W. T. Mayfield, Russell, Ark., wants to buy a new or second-hand saw mill complete, with twenty-five to forty-five horse-power engine.

Telephone Equipment.—A company about to purchase equipment for telephone system of 100 to 150 subscribers invites correspondence from manufacturers. Address B. D. Evans, Jr., Sandersville, Ga.

Water Motor.—C. W. Carson, Front Royal, Va., wants a second-hand four horse-power water motor in good order.

Water Wheel.—Rooney Bros., Fort Stockton, Texas, need a turbine wheel.

Water Wheels.—The Bannister Mills Co., R. Holt Easley, manager, Houston, Va., is in the market for two water wheels, second-hand, capable of producing forty to fifty horse-power each under seven-foot head with abundance of water.

Water Works.—The city of Malden, Mo., will receive bids until February 8 for the construction of a system of water works and erection of electric-light plant. Address G. W. Peck, mayor.

Water Works.—Graham, Va., wants information on water works, cost of pipe, pumping engines, electric wires, dynamos, etc. Address J. B. Greever.

Water Works.—Plans and specifications for water works will be wanted at Houma, La. Address T. C. Dupont, mayor.

Well-drilling Machinery.—J. M. Koontz, Fayetteville, W. Va., wants to buy machinery for drilling water wells 300 feet deep.

Woodworking Machinery.—M. H. Dalton, Palatka, Fla., wants to buy lathe for manufacturing handles.

Woodworking Machinery.—D. F. Hankins, Houston, Va., is in the market for a small second-hand planer and matcher in good order.

Woodworking Machinery.—The Hines Bros. Lumber Co., Kinston, N. C., will need a resaw, belting, shafting, pulleys, pipe and pipe fittings.

Woodworking Machinery.—The Charleston Lumber Co., Charleston, W. Va., wants to buy triple drum sander, mortiser, tenon machine, woodworker, pocket machine and jig saw.

Woodworking Machinery.—Catalogues and price-lists of furniture machinery is wanted by W. D. Lewis, Baldwin, Ga.

#### TRADE NOTES.

Jenkins Brothers, manufacturers of valves and standard packing, will remove their Boston store to No. 17 Pearl street by February 15.

The executive offices of the Manufacturers' Automatic Sprinkler Co. have been located in the Syndicate Building, Nassau and Liberty streets, New York city.

Many testimonials from persons in New York, Massachusetts and Connecticut have been received by Munson Brothers, of Utica, N. Y., as to the merits of their Robinson patent grinding mill, equipped with the Munson improved automatic feeder.

The James P. Wetherill Machine Co., of Chester, Pa., has added to its line of specialties the building of galvanized-iron water wheels for locations where there is a small amount of water with a large fall or where a turbine wheel would not be practical.

Mr. Fred S. Worham has resigned the secretaryship of the Steel Rail Supply Co., of New York, to become the Eastern agent of H. K. Porter & Co., of Pittsburg, Pa., builders of light locomotives. His office will be in New York, in the Record Building.

A large cotton mill at Cottondale, Ala., on the main line of the Alabama Great Southern Railroad, formerly owned and operated by the Tuscaloosa Manufacturing Co., is for sale. The death of its manager and half owner necessitates the sale to close up the business.

The Fred W. Wolf Co., of Chicago, Ill., has recently received contracts for ice-making machines, condensers or refrigerating plants in St. Louis, Mo., Peru, Ill., Durham, N. C., Newark, Ohio, Blue Island, Ill., Chicago, Ill., Macon, Ga., Asheville, N. C., Louisville, Ky., and Philadelphia, Pa.

The firm of Morton & Smith, to carry on a general engineering and contracting business, with offices in the Law Building, Baltimore, has been formed by Mr. D. G. Morton, formerly with the Southern Railway as assistant engineer on construction, later with the Baltimore & Ohio, and Mr. Julian C. Smith, who has for several years been engaged in street railway construction in Baltimore and Washington.

The directors of the Allentown (Pa.) Hardware Works have elected the following officers: President, W. K. Ruhe; vice-president, William Roth; secretary, D. J. Nagle;



treasurer, F. K. Hartzell; superintendent, H. P. Appleton; executive committee, H. K. Hartzell, William Roth and W. K. Ruhe. The works, employing 100 hands, have been running successfully during the past year on full time, and have a large number of orders booked and good prospects for this year's business.

It will be forty years on the first of March since the American Ship Windlass Co. started to make ship machinery, and during all this time its machines have stayed at the head in their line all over the country. The company's hand windlasses and locking gear contain improvements which were far in advance of anything used at that time. It was the same with the hand capstans, which have attained a world-wide reputation, gained by their great simplicity, strength and perfection of mechanism. The same is true of the steam windlasses and steam capstans, constant improvement being made until at present the styles exceed in simplicity and durability anything brought to the public anywhere today. It is admitted that during these forty years this company has never placed a single poor machine on the market or one that did not fully do the work guaranteed for it. This is acknowledged by the oldest and most substantial shipbuilders throughout the country.

### TRADE LITERATURE.

H. F. Lewis & Co., of New Orleans, La., have issued catalogue No. 2 of their Louisiana red cypress cisterns and water tanks.

The demand for copies of the 400-page library-bound catalogue of the Buffalo Forge Co. has become so great that a pocket-size edition will soon be issued, with a text duplicate of the larger volume.

The Ahrens & Ott Manufacturing Co., of Louisville, Ky., has issued a circular dealing with its white enameled iron closets, for which it claims perfect flush, sure action, durability and proof against frost.

The Illinois Malleable Iron Co., of Chicago, has endeavored to make its annual steam goods catalogue a standard book of reference for prospective purchasers of steam goods, engine and boiler trimmings, fitters' and machinists' tools, etc. The publication is largely illustrated.

The Clonbrock Steam Boiler Co., of Brooklyn, N. Y., has just issued a very fine catalogue, that can be had upon application. It contains, in addition to descriptions of the Morrill Climax water-tube boiler, carefully compiled facts of value to anybody having work upon or about any boiler.

The International Correspondence Schools, of Scranton, Pa., organized for home study in mechanics and mechanical drawing, have issued their circular of information for 1897. A smaller publication is filled with endorsements of the work of the schools from students in the United States and in all quarters of the globe.

### Modern Marine Machinery.

Complete outfits in either single or twin screw, side or stern paddle wheel machinery, built by Marine Iron Works, No. 9 Dominick street, Chicago. Catalog free.

Mr. John W. Hill, the celebrated consulting engineer, has associated himself with the C. H. & D. Traction Co. as consulting engineer to advise on the practicability of the use of compressed air as a motive power for their inter-urban service.

### Reduced Rates to Washington on Account of the Inauguration via Pennsylvania Railroad.

For the benefit of those who desire to attend the ceremonies incident to the inauguration of President-elect McKinley, the Pennsylvania Railroad Co. will sell excursion tickets to Washington, March 1, 2, 3 and 4, valid to return from March 4 to 8, at the following rates: From New York, \$8; Philadelphia, \$5.40; Baltimore, \$1.00; Harrisburg, \$5.06; Williamsport, \$8.79; Buffalo, \$11.20; Rochester, \$10.48; Altoona and Pittsburg, \$10, and from all other stations on the Pennsylvania system at reduced rates.

This inauguration will be a most interesting event, and will undoubtedly attract a large number of people from every section of the country.

The magnificent facilities of the Pennsylvania Railroad make this line the favorite route to the national capital at all times, and its enormous equipment and splendid terminal advantages at Washington make it especially popular on such occasions.

Fast freight trains running on passenger schedule and arriving at destination on time seem to be a fad with railroads that is proving profitable. The two last in the field are Nos. 97 and 98, on the B. & O. S. W. and B. & O., from St. Louis to New York and vice versa. The east-bound train is scheduled at eighty hours from St. Louis to New York, seventy-five hours to Philadelphia and seventy hours to Baltimore. The west-bound time is even faster, being sixty hours from New York, fifty-five from Philadelphia and fifty from Baltimore. Arrangements have been made by the B. & O. S. W. to load cars at St. Louis direct for the Eastern cities.

The fact that local business pays a greater return on the money invested is well known to the officials of the B. & O. S. W., and for some time past General Traffic Manager Randolph has been investigating the towns along the line from St. Louis to Parkersburg, with a view to attracting new manufacturing plants to points where labor and material were not very expensive. In order to promulgate this information, he has established what has been denominated a Bureau of Development, in charge of W. W. Peabody, Jr., and H. A. Trondley has been appointed special agent, with headquarters in Cincinnati. It will be his duty to travel and try and interest manufacturers in the B. & O. S. W. towns, and at the same time assist the towns to develop. It is expected that the new department will add greatly to the already numerous factories on the road, and the people of the towns and cities to be benefited are giving the bureau the heartiest support.

### A Magnificent Road.

It is a revelation to most people to know that such railway equipment exists south of the Ohio river as that of the Queen & Crescent Route. The block system, electric equipment, such as track signals, electric headlights and crossing gongs, together with a perfectly lined, rock-ballasted roadbed, all provide for the swift and safe movement of passenger trains of the most luxurious pattern. The New Orleans and Florida Limited leaves Cincinnati over the Queen & Crescent Route daily, on schedules which each year are made a little shorter, through scenery which is unsurpassed. W. C. Rinearson, general passenger agent, Cincinnati, Ohio.

### To Florida via Pennsylvania Railroad.

The mid-winter exodus has begun. The discomforts and dangers of wet winter weather are here, but to the southward, from a cloudless sky, beams a beautiful sun upon a blooming land.

The next Pennsylvania Railroad tour to Jacksonville, allowing two weeks in Florida, will leave New York and Philadelphia February 9.

Excursion tickets, including railway transportation, Pullman accommodations (one berth), and meals en route in both directions while traveling on the special train, will be sold at the following rates: New York, \$50; Philadelphia, \$48; Canandaigua, \$52.85; Erie, \$54.85; Pittsburg, \$53, and at proportionate rates from other points.

For tickets, itineraries and other information apply to ticket agents, tourist agent at 1196 Broadway, New York, or to George W. Boyd, assistant general passenger agent, Broad Street Station, Philadelphia.

### Tour to California via Pennsylvania Railroad.

The next California tour of the Pennsylvania Railroad will leave New York and Philadelphia by special train of Pullman palace cars February 24, visiting the great Mammoth Cave and stopping at New Orleans during the Mardi Gras Carnival. Four weeks will be allowed on the Pacific coast, and two days will be spent on the return trip at Colorado Springs and the Garden of the Gods. Stops will also be made at Salt Lake City, Denver and Omaha. This is one of the most delightful and complete tours ever planned.

Tickets, including railroad transportation, Pullman accommodations (one double berth), meals en route, carriage drives and hotel accommodations going and return, and transportation in California, will be sold at rate of \$350 from all stations on the Pennsylvania Railroad system east of Pittsburg.

Apply to ticket agents, tourist agent, 1196 Broadway, New York, or George W. Boyd, assistant general passenger agent, Broad Street Station, Philadelphia.

## FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

No advertisements but those of a financial character will be accepted for the following page.

### THE SOUTH AGAIN LEADS.

Less Bank Failures in 1896 Than in Any Other Section of the Country.

The summary of bank failures during 1896 proves that the South has made a very creditable showing compared with other sections of the country, especially the West and North. In the South the following is a list of the State and private banks which failed or went into liquidation during the year and the number of new banks:

	Failed or liquidated.	New banks.
Alabama	1	3
Arkansas	6	9
Florida	1	4
Georgia	6	14
Kentucky	4	9
Louisiana	1	4
Maryland	..	6
Mississippi	1	13
North Carolina	1	9
South Carolina	5	8
Tennessee	4	5
Texas	12	21
Virginia	2	12
West Virginia	..	6

It will be noted that the largest number of liquidations and failures were in Texas—twelve, but this is offset by twenty-one new banks being opened in the State. In Nebraska the number of liquidations and failures were thirty and but six new banks were opened. In New Hampshire there were six failures and no new banks opened, while in Kansas, which has the greatest record of failures and liquidations—thirty-seven in all—there were but eighteen new banks opened. Illinois has a record of twenty-eight liquidations and failures and seventeen new banks opened. Turning to the State of New York, we find eighteen in the first list and but six new banks. Pennsylvania's record is ten liquidations and failures and fourteen new banks. The State of Wisconsin has the best record of all for 1896, no failures or liquidations being reported and seventeen new banks organized. However, Mississippi is very close to it, its record being but one failure and thirteen new banks opened. Next to Wisconsin, Mississippi has the best record of any State in the country. Maryland and West Virginia also have very creditable records—no suspensions and six new banks each.

If the month of January were considered in this comparison it would be all the more creditable to the South, for since January 1, as is well known, a large number of failures have occurred in the Northwest, especially in Michigan, Minnesota and Illinois. The table shows significantly on what a sound basis the banks of the South are established; also the fact that they are as conservatively managed as three years ago, when the South made the best showing in the whole country during the so-called "bank panic," as proved by statistics given in the Manufacturers' Record at that time.

### Southern Bank Appointments.

Arkansas.—F. N. Rix, cashier of the Arkansas National Bank of Hot Springs.

Georgia.—Merchants' National Bank of Rome, E. A. Heard, cashier.

Kentucky.—Madison National Bank of Richmond, Waller Bennett, president.

Mississippi.—First National Bank of West Point, T. M. Moseley, vice-presi-

dent; Isham Evans, cashier. First National Bank of Meridian, Edwin McMorries, cashier.

South Carolina.—I. S. Cohen, cashier of the Charleston Savings Institution.

Texas.—The Citizens' National Bank of Weatherford, Charles Barthold, vice-president. The Ennis National Bank, Mark Latimer, second vice-president; A. H. Dunkerly, cashier. First National Bank of Cleburne, C. Dickson, president; P. C. Chambers, vice-president; C. W. Mertz, cashier. Commercial National Bank of Houston, James A. Baker, Jr., vice-president; John J. Gannon, cashier. Lavaca County National Bank of Hallettsville, A. B. Devall, president; Carey Shaw, vice-president. Farmers and Merchants' National Bank of Waco, R. T. Dennis, cashier. First National Bank of Grand View, Philip Walker, vice-president. First National Bank of Itasca, F. M. Files, president. Farmers' National Bank of Hempstead, B. Schwarz, president; John C. Ansler, vice-president.

Virginia.—First National Bank of Roanoke, B. N. Hatcher, vice-president. National Exchange Bank of Lynchburg, N. C. Manson, Jr., vice-president.

### New Corporations.

The business men of Littleton, N. C., are endeavoring to form a banking company in the town.

The proposed national bank at Gaffney, S. C., will have \$50,000 capital. H. D. Wheat, C. E. Wilkins and others are interested.

The Union National Bank, at Newport, Ky., will have \$100,000 capital. John A. Williamson and A. L. Andrews are among the incorporators.

L. C. Stacy, J. B. Stewart and others are interested in the formation of a company to be known as the United States Loan & Trust Co. It is to have a capital of \$100,000 and offices at Atlanta.

### Dividends and Interest.

The Fidelity Trust & Vault Co. of Louisville has declared a dividend of 2 per cent., quarterly.

The Pulaski Loan & Trust Co., of Richmond, Va., has declared an annual dividend of 10 per cent.

Interest due on bonds of the Piedmont & Cumberland Railway will be paid by Hambleton & Co., Baltimore.

The Bayou Sara Compress Co., of St. Francisville, La., has declared a dividend of 10 per cent. for the year.

Interest due on bonds of the Louisville (Ky.) Water Co. will be paid by the company and the National Bank of the Republic, New York.

At the annual meeting of the Wheeling Street Railway Co. a quarterly dividend of 1¼ per cent. was declared. The following officers were elected: President, T. H. Conderman; vice-president, P. B. Dobbins; secretary, W. A. Shirley; manager, W. S. Wright; superintendent, Michael Loftus.

### New Securities.

The town of Flemingsburg, Ky., may issue \$5000 in bonds for improvements. Address the town clerk.

The town of Monroe, N. C., is reported to be considering a proposed issue of \$30,000 in bonds for improvements. Address the town clerk.

Hon. Bridges Smith will receive bids until February 9 for the issue of \$130,000 in 4½ per cent. bonds to be issued by the city of Macon, Ga.

R. H. Sommerville, treasurer of Montgomery, Ala., will receive bids until February 15 for \$150,000 in 6 per cent. bonds for paving purposes.

It is announced that Glynn county,



Georgia, may issue \$60,000 in bonds to construct a courthouse. The county clerk at Brunswick may be addressed.

The city authorities of Memphis, Tenn., have decided to sell the issue of \$60,000 in 5 per cent. bonds to Season-good & Mayer, of Cincinnati, Ohio, at 4 per cent. premium.

The proposed bond issue to be made by the city of Charleston, S. C., will bear interest at the rate of 5 per cent. It will be for refunding purposes. J. O. Lea, city treasurer, may be addressed.

The city of Baltimore has made another sale of its securities at an unusually high price. Securities of the par value of \$1,453,300 were sold to a syndicate represented by the Third National Bank at 105.77. The bonds are at 3½ per cent. interest. The last sale of 3½ per cent. securities was made at 105.23. The bidders for the last issue just sold were twenty-four in number, and the aggregate of the bids was \$19,036,300.

#### Financial Notes.

The Merchants and Planters' Bank of Bryan, Texas, has reopened for business with J. W. English, president; M. D. Cole, vice-president; J. N. Cole and A. D. McComie, assistant cashiers.

James R. Gilliam and others have formed a syndicate and purchased an interest in the National Exchange Bank of Lynchburg, Va. Mr. Gilliam has been elected president, and R. J. Hancock, vice-president.

The last report of the Dominion National Bank of Bristol, Va., reflects much credit on its present management. Although the bank's capital is but \$50,000, its deposits aggregate nearly \$150,000. Its securities for funds lent are of the highest character. The report of the examining committee shows that the business of the institution has increased in every department.

#### TRADE LITERATURE.

The Rowley & Hermance Co., of Williamsport, Pa., has just issued a finely illustrated catalogue for 1897, which will be sent to anybody desiring a copy.

The catalogue of the Imperial ball-bearing axle department of Kelley, Maus & Co., Chicago, shows a sectional view of the 1897 pattern of the Imperial ball-bearing axle, by which friction has been reduced to a minimum. More than 7000 sets of these axles are now in use, and during last year the manufacture of them was begun in Canada to meet the demand there. The catalogue contains fac-similes of letters from carriage manufacturers and from individuals testifying to the valuable qualities of the axle.

Persons interested in artificial ice-making and refrigerating processes will find much of value in a pamphlet just issued by the Remington Machine Co., of Wilmington, Del. Its aim is to give a general description of the methods employed and the machines manufactured by that company, and intending purchasers are supplied not only with much information of a general character, but with minute directions about particulars that are required in making estimates for plants. The pamphlet is profusely illustrated and bound in handy form.

Facts and figures embodied in the latest illustrated general catalogue of the Buffalo Forge Co., of Buffalo, N. Y., just issued, are of distinct value, inasmuch as they have been compiled from actual test records of the company's blowers and fan system of heating, ventilating and drying. Extensive experiments with refined and accurate instruments have furnished the material upon which the several tables and rules have been established. A number of cuts illustrate the buildings in various parts of the country where the apparatus and system are in use.

Messrs. I. B. Williams & Sons, Dover, N. H., are calling attention in a circular to several other brands of leather belting besides their celebrated "Coheco." They have one they call "Superior," which is a belt made from the full regular weight stock; in quality the best; all oak-bark tan-bage, and in all but the extra weight as good

#### TABLE OF CONTENTS.

EDITORIAL:	Page.
A Report of the U. S. Agricultural Department on Round Cotton-Baling System.....	17
No Pictitious Mining-Stock Boom Wanted.....	17
Science on a Scientific Basis.....	18
An Unwise Suggestion in North Carolina.....	18
Deepening the Mississippi Channel.....	18
Manufacturers in Convention.....	18
Sanitation and Neatness.....	19
Mr. Edward Atkinson on Farm Conditions.....	20
The Long-Talked-Of Steel Mill.....	20
A Criticism of Banking Methods.....	20
Some Suggestions for Financial Reforms.....	21
Coal and Lumber Interests Around Clarksburg, W. Va.....	21
Recent Letters on the Business Outlook.....	22
Southern Investments.....	22
Corn at Southern Ports.....	22
RAILROAD NEWS:	
Railroads in 1897.....	22
Little Rock & Memphis Extension.....	23
Charleston's Street Railway Combination.....	23
B. & O. Electric Service.....	23
New B. & O. Chicago Line.....	23
For Additional Terminals.....	23
Mobile & Birmingham's Report.....	23
Compressed Air for Locomotives.....	23
Alabama Coal Contracts.....	23
Seaboard Air Line's Exhibits.....	23
Important Electric Line.....	23
Ohio River & Charleston.....	23
The Tennessee Northern.....	23
Appointments on the Southern.....	23
Railroad Notes.....	23
TEXTILES:	
New England Editors vs. New England Manufacturers.....	24
Dalton (Ga.) Mill to Add 10,000 Spindles.....	24
The New Variety of Cotton.....	24
Textile Notes.....	24
The Importance of Expert Automatic Sprinkler Installation.....	24
COTTONSEED OIL:	
The Market for Cottonseed Products.....	24
Cottonseed-Oil Notes.....	25
PHOSPHATES:	
Phosphate Markets.....	25
Phosphate and Fertilizer Notes.....	25
Gold-Mining in River Bed.....	25
LUMBER:	
Lumber Market Reviews:	
Baltimore.....	26
Charleston.....	26
Savannah.....	26
Pensacola.....	26
Jacksonville.....	26
Mobile.....	26
Beaumont.....	27
Lumber Notes.....	27
MECHANICAL:	
In a Ready-Made Town (Illus.).....	28
Improved Telephones (Illus.).....	29
Weldless Steel Rake (Illus.).....	29
Economy of Coal Mining by Machinery.....	29
Iron Markets.....	29
Farming Convicts in Texas.....	29
CONSTRUCTION DEPARTMENT:	
New Enterprises.....	30
Building Notes.....	32
Railroad Construction.....	32
Machinery Wanted.....	33
Trade Notes.....	33
Trade Literature.....	34
FINANCIAL NEWS:	
The South Again Lends.....	34
Southern Bank Appointments.....	34
New Corporations.....	34
Dividends and Interest.....	34
New Securities.....	34
Financial Notes.....	35

as their best. They claim it to be better adapted to many places than the "Coheco" even, when used in the medium and smaller sizes and on smaller pulleys. Full particulars and catalogue can be had by addressing the office of the company, Dover, N. H.

There are few places where stationary boilers of any size or number are employed where it would not pay to have a fuel economizer. This is designed to utilize the surplus heat from steam boilers in heating the feed water for the boilers. Fifty-two years ago Mr. Edward Green, an Englishman, invented an apparatus for arresting and utilizing escaping heat, and since then it has been applied to 150,000 boilers, representing 30,000,000 horse-power. A book descriptive and illustrative of Green's fuel economizer has been issued by its manufacturer in this country, the Fuel Economizer Co., of Mattawan, N. Y.

J. WM. MIDDENDORF.

Members Baltimore Stock Exchange.

WM. B. OLIVER.

## MIDDENDORF, OLIVER & CO. BANKERS AND BROKERS,

No. 213 E. German Street, [KEYER BUILDING.] Baltimore, Md.  
Stocks and Bonds Bought and Sold on Commission. Special attention given to Municipal and other Investment Loans. Dealers in Foreign Exchange. Drafts on Europe and Letters of Credit furnished.

## SPERRY, JONES & CO.

DEALERS IN Southern Investment Securities,

239 East German Street, Baltimore, Md.

OUR FACILITIES ARE UNEXCELLED.

### JOHN L. WILLIAMS & SONS, BANKERS,

Dealers in RICHMOND, VA.

Southern Investment Securities,  
MUNICIPAL BONDS A SPECIALTY.  
Correspondence Invited.

### O. W. CLAPP & CO., Inc.

Brokers and Commission Merchants,

Mills Building, NEW YORK,

SOLICIT AND EXECUTE ORDERS ON  
New York Stock Exchange.

New York Produce Exchange.  
New York Cotton Exchange.

Chicago Board of Trade.

Unsurpassed Private Wire Facilities to New York, Chicago and Western Exchanges.

Cable Address, OZRO.

Market Letters to applicants.  
CLAPP'S SOUVENIR TO CUSTOMERS.

### Mercantile Trust & Deposit Co.

OF BALTIMORE.

Paid-up Capital, \$1,000,000.  
Surplus, \$1,000,000.

DEPOSITS RECEIVED  
On which interest is allowed, governed by current rates obtainable

TRUSTEES AND ADMINISTRATORS.  
This company is a Legal Depository for funds in the hands of Trustees or Administrators, and allows interest on same pending distribution.

Authorized to act as Executor, Administrator, Guardian, Receiver or Trustee.

ACTS as Trustee of Mortgages of Corporations and accepts Transfer Agency and Registry of Stocks.

Safe Deposit Boxes for Rent.  
Vaults supplied for Storage of Silver Chests, etc.

JOHN GILL, of R., President.

### SURETY BONDS OF EVERY KIND.

### American Bonding & Trust Co.

OF BALTIMORE CITY.

Equitable Building, Baltimore.

Total Resources \$1,091,550.49.

JAMES BOND, President.  
JOSHUA HORNER, First Vice-President.

JOSEPH S. MILLER, Second Vice-President.  
JOHN T. STONE, Secretary-Treasurer.

GEO. N. MACKENZIE, Asst. Secretary-Treas.

Accepted by the United States Government as Sole Surety on Bonds of Distillers, Importers, Customs House, Postoffice, Internal Revenue and other Government Officials and Employees, and by all Federal and State Courts. Gives Bond for Officers of Corporations, Lodges, Societies, etc., Clerks and all other Employees.

Does not act as Executor, Administrator, Trustee, Guardian, Receiver or Committee, BUT BONDS THOSE WHO DO ACT.

### Fidelity and Judicial Bonds of every kind Issued by

### The United States Fidelity and Guarantee Co. OF BALTIMORE.

SOLICITS YOUR PATRONAGE.

Office, CALVERT AND GERMAN STREETS.  
Telephone 268.

Bonds furnished Officers and Employees of Mercantile Houses, Banks, Railroads, Express and Telegraph Companies.

Officials of States, Cities and Counties. Becomes Surety on Bonds of Guardians, Assignees, Executors, Trustees, Replevin, Injunctions, Administrators, Receivers, Attachment, and all undertakings in Judicial Proceedings in State and United States Courts. Does not act as Executor, Administrator or Trustee. Patronage of Lawyers specially solicited and special rates given.

CAPITAL.....\$500,000.00  
STOCKHOLDERS' LIABILITY.....500,000.00

TOTAL RESOURCES.....\$1,000,000.00  
HON FRANK BROWN, President. Governor of Maryland from 1892 to 1896.

JOHN R. BLAND, Vice Pres. and Gen. Manager.  
J. KEMP BARTLETT, JR., Second Vice-Pres.

ALEXANDER PAYSON KNAPP, Secretary.  
TOWNSEND SCOTT, Treasurer.

HON. I. IDOR RAYNER, General Counsel.  
MARTIN LEHMAYER, Assistant Counsel.

WILLIAM B. RAYNER, Assistant Counsel.

## MARYLAND TRUST CO.

Corner South and German Sts.

BALTIMORE.

CAPITAL, - \$1,000,000.

A LEGAL DEPOSITORY FOR COURT AND TRUST FUNDS.

Acts as Financial Agent for States, Cities, Towns, Railroads and other Corporations. Transacts a general trust business. Lends money on approved security. Allows interest on special deposits. Acts as Trustee under Mortgages, Assignments and Deeds of Trust; as Agent for the Transfer or Registration of Stocks and Bonds, and for the payment of coupons, interest and dividends.

J. WILLCOX BROWN, PRESIDENT.  
LLOYD L. JACKSON, FIRST VICE-PRES.

HENRY J. BOWDOIN, SECOND VICE-PRES.  
J. BERNARD SCOTT, Secretary and Treasurer.

DIRECTORS:

J. Willcox Brown, Leopold Strouse,  
Wm. A. Marburg, Henry Walters,  
Basil B. Gordon, H. A. Parr,  
Lloyd L. Jackson, B. N. Baker,  
Fred. M. Colston, Andrew D. Jones,  
H. J. Bowdoin, James Bond,  
Joshua Levering, Alexander Brown,  
Frank Brown, Douglas H. Gordon,  
W. B. Brooks, Jr., Clayton C. Hall,  
W. H. Baldwin, J. D. Baker,  
Frank W. Wood, F. S. Bangs,  
F. M. Thieriot, John R. Garrett.

**WOULDN'T  
YOU LIKE  
TO OWN AN  
INTEREST IN  
A GOLD MINE?**

Suppose you write for particulars about

## THE BIG UNION MINING CO

This company owns and is now opening up rich gold mines in the famous Leadville Gold Belt of Colorado. The officers and stockholders of the company are not speculators but are well-known conservative business men. Here are some of them:

OFFICERS.  
R. E. LYON, President.  
STEPHEN H. EMMENS, Vice-President.

L. L. POWELL, Secretary.  
H. B. TILDEN, Treasurer.

ARCHIBALD H. TAYLOR, Gen'l Counsel.

DIRECTORS.

B. L. Duke, the great tobacco manufacturer  
Durham, N. C.

W. T. O'Brien of the American Tobacco Co.,  
Durham, N. C.

Stephen H. Emmens, Pres. of the Mining and Industrial Exchange, New York City.

R. E. Lyon, of Baltimore, Md.

Geo. C. S. huermann, of Baltimore, Md.

L. D. Heatt, Cashier First Nat'l Bk Durham, N.C.

H. B. Tilden, of Baltimore, Md.

The stock of this company has been listed on the New York Mining and Industrial Exchange. The office of the company is at 849 Equitable Building, Baltimore, Md.

The treasury stock now being offered affords an investment opportunity that is well worth looking into.

The Big Union Mines, the property of this company, lie on the same contact vein with the most noted of the great Leadville mines. One of these the "Little Johnny" is the greatest gold mine in Colorado and perhaps in the world. Its present output is about \$300,000 per month. It paid last year \$1,600,000 in dividends and is now paying monthly dividends of \$100,000 to \$200,000.



# Alphabetical Index of Advertisers.

For "Classified Index" see pages 3, 5 and 7.

<b>A</b>	Chicago Belting Co. .... 10	Gates Iron Works. .... 29	Mercantile Trust & Deposit Co. .... 35	Sears, Clinton B. .... 21
Acme Filter Co. .... 17	Chrome Steel Works. .... 13	General Electric Co. .... 34, 42	Merchant. .... 22	Sexton, S. B., & Son. .... 44
Adams & Price L. & M. Works. .... 29	Cincinnati Corrugating Co. .... 31	General Fire Extinguisher Co. .... 21	Merchants & Miners' Transp. Co. .... 40	Seyferts, I. S., Sons. .... 23
Adams, George S. .... 18	Cin., Hamilton & Dayton R. R. .... 1	Gilbert, C. M., & Co. .... 8	Mergenthaler, Ott., & Co. .... 9	Shaw, Willis. .... 23
Adams, William H. .... 6	Clapp, Geo. M. .... 23	Gillette-Herzog Mfg. Co. .... 31	Meyer, Dr. Otto .... 6	Shawhan-Thresher Electric Co. .... 43
Ahrens & Ott Mfg. Co. .... 10	Clapp, O. W., & Co. .... 35	Glascock & Co. .... 21	Middendorf, Oliver & Co. .... 35	Shultz Belting Co. .... 10
Aiken, Wm. Martin .... 21	Clark, W. J., Co. .... 8	Glaskin, George F., & Co. .... 6	Milburn, Frank P. .... 17	Simmons, W. Seabury. .... 33
Akron Belting Co. .... 10	Clark, Jeremiah. .... 33	Glen Cove Machine Co., Ltd. .... 27	Miller Gas Engine Co. .... 17	Simpson, J. S. & G. F. .... 29
Alabama Bridge & Boiler Co. .... 9	Clements, F. B. .... 22	Glidden Specialty Supply Co. .... 44	Milner & Kettig Co. .... 37	Sinclair, S. H., Co. .... 37
Alber & Byrne. .... 6	Climax Mfg. Co. .... 13	Goetze, Otto .... 23	Minnigerode, Wm. .... 23	Situations Wanted. .... 21
Aldrich Stone Co. .... 21	Clonbrock Steam Boiler Co. .... 15	Golden's Foundry & Machine Co. .... 41	Mitshkun, M., & Co. .... 24	Skinner Chuck Co. .... 8
Alexander Bros. .... 10	Cohoes Iron Fdy. & Mch. Co. .... 34	Goubert Mfg. Co. .... 19	Moore & McCrary. .... 6	Smethurst & Allen. .... 43
Allen Anti-Rust Mfg. Co. .... 31	Commercial Electric Co. .... 43	Gourrant, John R. .... 24	More, Jones & Co. .... 36	Smith-Courtney Co. .... 9
Allentown Hardware Co. .... 13	Commercial Wood & Cement Co. .... 6	Gowdey, J. A., & Son. .... 33	Morse, Williams & Co. .... 36	Smith, R. B. .... 36
Allfree, J. B., Mfg. Co. .... 9	Consolidated Engineering Co. .... 6	Grand Rapids Carved Mould'g Co. .... 40	Mt. Vernon Co. .... 23	Smith, S. Morgan. .... 39
Aising, J. R., Co. .... 29	Consolidated Mining & Construction Co. .... 6	Grandy Bros. & Co. .... 6	Mundt & Sons. .... 35	Smith & Kilby Co. .... 23
American Bonding & Trust Co. .... 35	Consolidated Roofing Works. .... 8	Gregory Co., C. E. .... 23	Munson Bros. .... 35	Snow Steam Pump Works. .... 38
American Cotton Oil Co. .... 34	Contractors' Plant Mfg. Co., Ltd. .... 8	Gulbert, John C. N. .... 30	Murphy, John, & Co. .... 35	Southeastern Lime & Cement Co. .... 8
American Engine Co. .... 14	Cook-Stoddard Mfg. Co. .... 17	<b>H</b>	Murray, Dougal & Co. .... 44	Southern Foundry & Mch. Wks. .... 23
American Screw Co. .... 44	Cordesman, Meyer & Co. .... 25	Haines, Jones & Cadbury Co. .... 40	Murray, James & Son. .... 29	Southern Iron & Equipment Co. .... 24
American Ship Windlass Co. .... 37	Cortright Metal Roofing Co. .... 31	Hales & Ballinger. .... 6	<b>N</b>	Southern Iron Works. .... 13
American Supply Co. .... 39	Cotton States Belting & Supply Co. .... 11	Hall, H. T. .... 3	National Automatic Knitter Co. .... 32	Southern Log Cart & Supply Co. .... 17
American Well Works. .... 39	Covert Mfg. Co. .... 40	Harrington & King Perforat'g Co. .... 35	National Pipe Bending Co. .... 9	Southern Pacific Co. .... 1
Andersen Jun & Co., J. .... 22	Cox & Sons Co. .... 12	Harris, Wm. A., Steam Engine Co. .... 23	New Atlantic Hotel. .... 21	Southern Railway Co. .... 2
Apollo Iron & Steel Co. .... 20	Crook, W. A., & Bros. Co. .... 4	Hartford Steam Boiler Inspection & Insurance Co. .... 40	N. J. Car Spring & Rubber Co. .... 10	Southern Real Estate Exchange. .... 22
Armitage-Herschell Co. .... 40	Crompton Loom Works. .... 33	Hartley's Boiler Works. .... 16	Newburg Ice Mch. & Engine Co. .... 14	Southern Water Supply Co. .... 39
Armitage Mfg. Co. .... 31	Cronk Hanger Co. .... 42	Hausburg, E. O. .... 43	Newport News Shipbuilding & Dry Dock Co. .... 41	Sperry, Jones & Co. .... 35
Asbrand, C. W. .... 31	Cruikshank, D. B. .... 23	Hays, John W. .... 6	New Process Rawhide Co. .... 28	Springfield Gas Engine Co. .... 17
Atkins, E. C., & Co. .... 27	Crump, F. T., & Co. .... 22	Heffernan, Wm. A. .... 27	New York Electrical Equipment Co. .... 22	Springfield Machine Tool Co. .... 12
Atkins, Jos. L. .... 21	Culver Mfg. Co. .... 16	Heine Safety Boiler Co. .... 16	New York Equipment Co. .... 24	Sprout, Waldron & Co. .... 35
Atlanta Terra Cotta Co. .... 36	Currie, Andrew. .... 22	Help Wanted. .... 21	Niagara Stamping & Tool Co. .... 2	Standard Mill Supply Co. .... 33
<b>B</b>	Curtis & Marble Machine Co. .... 34	Hench & Dromgold. .... 25	Nicholson File Co. .... 44	Standard Paint Co. .... 31
Babcock & Wilcox Co. .... 15	Cutler Mfg. Co. .... 6	Hendrick Mfg. Co., Limited. .... 8	Nolte Brass Co. .... 30	Standard Tool Co. .... 44
Baeder, Adamson & Co. .... 8	Cypress Lumber Co. .... 28	Hewitt, F. R. .... 22	Nordyke & Marmon Co. .... 28	Starr, B. F., & Co. .... 35
Bailey-Lebby Co. .... 29	<b>D</b>	Hickman, Williams & Co. .... 23	Norfolk & Western R. R. .... 2	Stearnes & Gray. .... *
Bailey, John T., & Co. .... 20	Dake Engine Co. .... 8	Hirsch, L. K. .... 24	North American Metaline Co. .... 9	Steel Rail Supply Co. .... 24
Baldwin Locomotive Works. .... 13	Dallett & Co. .... 24	Holmes, E. & B., Machinery Co. .... 26	Norton Emery Wheel Co. .... 37	Stender, Wm. L. .... 13
Ball Engine Co. .... 14	Damascus Bronze Co. .... 13	Holt, E. J. .... 22	Nye & Tredick. .... 33	Sterling Emery Wheel Mfg. Co. .... 41
Baltimore, Chesapeake & Richmond Steamboat Co. .... 40	Daniels, Frank, & Co. .... 9	Hoopes & Townsend Co. .... 37	<b>O</b>	Stevens, H., Sons Co. .... 44
Baltimore Engraving Co. .... 21	Davis & Egan Mch. Tool Co. .... 23	Hooven, Owens & Rentschler Co. .... 14	Oberlathe Co. .... 25	Stewart, Jas., & Co. .... 6
Baltimore Storage & Light Co. .... 40	Davis Coal & Coke Co. .... 8	Howard-Harrison Iron Co. .... 36	Obermyer, S., Co. .... 44	Stilwell-Bierce & Smith-Valle Co. .... 38, 39
Barber Asphalt Paving Co. .... 21	Davis Farrar Co. .... 38	Humphries Mfg. Co., The. .... 39	Old Dominion Line. .... 40	Stiles, J. W., Assignee. .... 22
Barkman, Dr. G. W. .... 23	Davis Foundry and Mch. Works. .... 39	Huther Bros. .... 25	Otto Gas Engine Works. .... *	Stow Mfg. Co. .... 9
Barnes Mfg. Co. .... 38	Davis, Kelly & Co. .... 23	<b>I</b>	<b>P</b>	Struthers, Wells & Co. .... 16
Barnes, W. F. & John, Co. .... 12	Dean Bros. Steam Pump Works. .... 38	India Alkali Works. .... 33	Palmerston. .... 22	Stuebner, G. L., Co. .... 8
Barnett, G. & H., Co. .... 44	Defiance Machine Works. .... 26	Ingersoll-Sergeant Drill Co. .... 20	Pancoast, Henry B., & Co. .... 37	Sturtevant, B. F., Co. .... 34
Bates's, James, Sons. .... 8	De Kalb, Courtenay. .... 6	International Corres. Schools. .... 6	Pancoast Ventilator Co. .... 31	Sturtevant Mill Co. .... 28
Battle Creek Steam Pump Co. .... 38	De Loach Mill Mfg. Co. .... 27	<b>J</b>	Patrick & Carter Co. .... 43	Sullivan Machinery Co. .... 30
Bay Line. .... 40	Deming Co. .... 38	Jamieson Fire-Resisting Paint Co. .... 2	Pauly Jail Bldg & Mfg. Co. .... 36	Superintendent. .... 21
Beach, H. L. .... *	Dempwolf, C. H., & Co. .... 29	Janney & Steinmetz. .... 43	Paxson, J. W., & Co. .... 8	Superior Gas Engine Co. .... 17
Beckley, A. J., & Co. .... 28	Detroit Mill Supply Co. .... 13	Jeffrey Mfg. Co. .... 8	Peacock, George. .... 4	Thomson, W. H., & Co. .... 31
Benjamin, O. P., Mfg. Co. .... *	Disston, Henry, & Sons. .... 27	Jenkins Bros. .... 44	Peck-Hammnd Co. .... 35	Titus, E. B. .... 27
Bertsch & Co. .... 30	Dixon, Jos., Crucible Co. .... 44	Jewell Belting Co. .... 11	Penberthy Injector Co. .... 44	Toomey, Frank. .... 23
Bealy, Chas. H., & Co. .... 44	Dodson, E. F., & Co. .... 6	Johnston. .... 22	Penn Telephone Co. .... 43	Trenton Iron Co. .... 4
Bethlehem Iron Co. .... *	Dolg, Wm. S. .... *	Johnson Tool Co. .... 9	Pennsylvania Machine Co., Ltd. .... 23	Trevor Mfg. Co. .... 25
Big Four Route. .... 1	Donnelly, J. C. .... 25	Joseph, Isaac, Iron Co. .... 24	Perkins Mfg. Co. .... 24	Tudor Boiler Mfg. Co. .... 14
Big Union Mining Co. .... 35	Dopp, H. Wm., & Son. .... 34	<b>K</b>	Pettee Machine Works. .... 34	<b>U</b>
Bing, J. Howard. .... 17	Dow Wire Works Co. .... 31	Kansas City Wheel Scraper Co. .... 44	Philadelphia Bourse. .... 9	Union Drawn Steel Co. .... 41
Bird, Wm. M., & Co. .... 8	Draper, Geo., & Sons. .... 20, 32	Keeler, E., Co. .... 14	Philadelphia Eng. Works, Ltd. .... 16	Union Electric Co. .... 43
Birmingham Boiler Works. .... 9	Draper Machine Tool Co. .... 12	Keley, James A. .... 6	Phila. Machine Screw Works. .... 14	Union Foundry & Machine Works. .... 28
Black Mfg. Co. .... 43	Dufur & Co. .... 30	Kelly, O. S., Co., The. .... 8	Philadelphia Steel Roofing Co. .... 31	Union Iron Works Co. .... 24
Bliss Co., E. W. .... 12	Dunlap, Frank M. .... 6	Kilbourne & Jacobs Mfg. Co. .... 4	Pittsburgh Locomotive Works. .... *	U. S. Fidelity & Guarantee Co. of Baltimore. .... 35
Block-Pollak Iron Co. .... 24	Dunning, W. D. .... 21	Kilburn, Lincoln & Co. .... 33	Pneumatic Engineering Co. .... 39	U. S. Machine Co. .... *
Boomer & Boschert Press Co. .... 21	Duson, W. W., & Bro. .... 22	Knowles Loom Works. .... 34	Pomona Terra Cotta Co. .... 36	U. S. Sanitary Co. .... 28
Boston Belting Co. .... 11	<b>E</b>	Knox, Henry E., Jr. .... 6	Pope Mfg. Co. .... 36	<b>V</b>
Bowman, A. B. .... 23	Easton & Burnham Machine Co. .... 34	<b>L</b>	Porter, H. K., & Co. .... 13	Valk & Murdoch Iron Works. .... 14
Box 1. .... 22	Eccles, S., Jr. .... *	Lane Manufacturing Co. .... 25	Poulter & Co. .... 23	Valley Iron Works. .... 10
Bradford Mill Co. .... 12	Eisenbrandt Cycle Co. .... 43	Lawrence Cement Co. .... 20	Powhatan Clay Mfg. Co. .... 24	Vanduzen Co., The E. W. .... 39
Bradley Pulverizer Co. .... 28	Emerson Co. .... 25	Leathley, Wm., & Co. .... 39	Pratt, N. P., Laboratory. .... 6	Vanduzen Gasoline Engine Co. .... 17
Bradstreet Company. .... 21	Empire Glass & Decoration Co. .... 31	Leffell, James, & Co. .... 14	Price & Co. .... 24	Van Noorden, E., & Co. .... 6
Branson Machine Co. .... 32	Empire Paint & Roofing Co. .... *	Leisenring Mfg. Co. .... 17	Price & Heald. .... 24	Van Wie, Irwin. .... 39
Brooks, T. H., & Co. .... 31	Enterprise Boiler Co. .... 15	Leonard, Foley & Co. .... 6	Priestman Co. .... 40	Viaduct Mfg. Co. .... 43
Broomell, Schmidt & Co. .... 19	Etting, Edward J. .... 23	Lewis, W. S. .... 24	Providence Machine Co. .... 34	Virginia Bridge & Iron Co. .... 22
Brotherhood, F., Receiver. .... 23	Exchange Banking & Trust Co. .... 22	Lidgerwood Manufacturing Co. .... 4	Pulsometer Steam Pump Co. .... 38	Vulcan Works. .... 33
Brown, A. & F. .... 41	<b>F</b>	Link-Belt Engineering Co. .... 8	<b>Q</b>	<b>W</b>
Brown Hoisting & Con. Mch. Co. .... 20	Falis Rivet & Machine Co. .... 41	Lombard Iron Wks. & Supply Co. .... 9	Q. & C. Company. .... 12	Wais & Roos Punch & Shear Co. .... 23
Buckeye Iron and Brass Works. .... 34	Farmers' Fertilizer Co. .... 23	Lorain Foundry Co. .... 13	Queen City Printing Ink Co. .... 40	Walker & Elliott. .... 29
Buckley, John H. .... 6	Farquhar, A. B., Co., Limited. .... 25	Lowell Machine Shop. .... 33	Queen City Supply Co. .... 12	Warren Chemical & Mfg. Co. .... 30
Buffalo Forge Co. .... 44	Fay, J. A., & Egan Co. .... 26	Ludlow-Saylor Wire Co. .... 30	<b>R</b>	Washington Slate Co. .... 30
Bureau of Freight and Transportation, Charleston, S. C. .... 20	Fay Manila Roofing Co. .... 31	Lunkenheimer Co. .... 44	Rawson Electric Co. .... 43	Watkins & Hardaway. .... 6
Burnham Bros. .... 39	Fernandina Oil & Creosote Works. .... 24	Lynchburg Industrial Association. .... *	Rea, Thomas M. .... 21	Webster, Warren, & Co. .... 35
Burrows, E. T., Co. .... 31	Fifield Tool Co. .... 12	Lyon, A. I. .... *	Record Printing House. .... 39	Wedderburn, John, & Co. .... 21
Bu t Labelling Machine Co. .... 35	Fitz-Hugh & Spencer. .... 23	<b>M</b>	Reliance Gauge Co. .... 16	Weir Frog Co. .... 42
Bushnell, G. H., Press Co. .... 33	Fleming Mfg. Co. .... 44	Main Belting Co. .... 10	Remington Machine Co. .... *	Wells Light Mfg. Co. .... 41
Byers, Jno. F., Machine Co. .... 8	Fogg, M. .... 23	Makepeace, C. R., & Co. .... 6	Repauno Chemical Co. .... 10	Western Electrical Supply Co. .... 42
<b>C</b>	Foss Gas Engine Co. .... 17	Manifold, S. M. .... 23	Rhoads, J. E., & Sons. .... 11	Western Maryland Railroad. .... 1
Cahall Sales Department. .... 20	Foss Mfg. Co. .... *	Mann & Co. .... 21	Richmond Loco. & Mch. Wks. .... 13	Westinghouse Air Brake Co., The. .... 2
Caldwell, H. W., & Son Co. .... 4	Forbes, W. D., & Co. .... 9	Manufacturers' Aut. Sprinkler Co. .... 24	Roberts Mfg. Co. .... 8	Westinghouse Elec. & Mfg. Co. .... 14, 23
Cameron, A. S., Steam Pump Wks. .... 38	Forsyth, S. C., Machine Co. .... 12	Marion Steam Shovel Co. .... 2	Robinson, Jas., Mfg. Co. .... 30	West Virginia Bridge Works. .... 36
Cameron & Barkley Co. .... 29	Fort Wayne Electric Corporation. .... 43	Martinez, Dion. .... 6	Robins, A. K., & Co. .... 35	Wetherill, J. P., Machine Co. .... 39
Campbell & Zell Co. .... 15	Fort Wayne Safety Valve Works. .... 16	Maryland Mfg. & Construc'n Co. .... 43	Robinson, J. M., & Co. .... 30	Whaley, W. H., Smith, & Co. .... 15
Canton Steel Roofing Co. .... 31	Fossick Co., T. L. .... 6	Maryland Steel Co. .... 2	Robinson, Wm. C., & Son. .... 42	Whitely & Lake Erie Railway. .... 1
Capital Traction Co. .... 22	Franklin Elec. & Mfg. Co. .... 42	Maryland Trust Co. .... 35	Robinson & Orr. .... 24	Wherritt, W. H. .... 21
Cardwell Machine Co. .... 34	Freese, E. M., & Co. .... 19	Mason Machine Works. .... 33	Rome Tack & Nail Co. .... 42	White, H. L., & Co. .... 24
Carnell, George. .... 24	French, Saml. H., & Co. .... *	Mason Regulator Co. .... 14	Roth Bros. & Co. .... 43	White, L. & L. J., Co. .... *
Caroline Iron Works. .... 30	Freret, F. W. .... 33	McAllister, Wm. M. & J. T. .... 13	Rowley & Hermance Co. .... 27	Whitinsville Spinning Ring Co. .... 33
Carver Cotton Gin Co. .... 34	Frick Co. .... 14	McClave, Brooks & Co. .... 17	Ruger, J. W., & Co. .... 17	Wilkinson Mfg. Co. .... 15
Casey & Hedges Mfg. Co., The. .... *	Froehling, Dr. Henry. .... 6	McConnell, J. J., & Co. .... 30	Ruttle, W. A. .... 21	Willer Mfg. Co. .... 21
Caster & Curran. .... 8	Fuel Economizer Co. .... 19	McCully, R. .... 23	<b>S</b>	Williams Bros. .... 39
Channon Co., H. .... 19	Fuller Engineering Co. .... 17	McDonough & Co. .... 23	Salmen Brick & Lumber Co. .... 24	Williams, Haskins. .... 24
Chapman, Wm. A., & Co. .... 6	Fulton, John. .... 6	McDowell, Hamilton. .... 23	Sanderson, John. .... 6	Williams, I. B., & Sons. .... 11
Chapman Valve Mfg. Co. .... 37	Furbush, M. A., & Son, Mch. Co. .... 33	McFadden, Chas., Jr. .... 40	Saunders, D., Sons. .... 12	Williams, John L., & Son. .... 35
Charlotte Machine Co. .... 34	<b>G</b>	McGowan, John H., Co. .... 38	Seabury, Charles L., & Co. .... 36	Williamsport Machine Co. .... 26
Chattanooga Fdy. & Pipe Works. .... 37	Gallert, S. .... 22	McKenna, David. .... 31	Seabury, Charles L., & Co. .... 36	Wilson Laundry Machinery Co. .... 37
Chesapeake Belting Co. .... 10	Gandy Belting Co. .... 10	McLanahan & Stone. .... 28	Searcy, eo. A. .... 22	Wilston & Buss. .... 6
Chesley Electric Co. .... 23	Garber, D. A. .... 6	Mecklenburg Iron Works. .... 20		Wolf & Co., Aug. .... 20
Chester Steel Castings Co. .... 13	Garrett, C. S., & Son. .... 31			Wolf Co., Fred. W. .... 25

Ads. marked thus \* appear every other week.  
Ads. marked thus † appear in first issue of each month.  
Ads. marked thus ‡ not in this issue.